DOCUMENT RESUME

ED 046 878 SP 004 618

AUTHOR	Gibboney, Richard A.; And Others
TITLE	An Evaluation of the Experimental Teacher Preparation Program in Urban Education.
INSTITUTION	Pennsylvania Univ., Philadelphia. Graduate School of Education.
SPONS AGENCY	Office of Education (DHEW), Washington, D.C.; Philadelphia Foundation, Pa.
PUB DATE	Aug 70
NOTE	285p.
EDRS PRICE	EDRS Price MF-$0.65 HC-$9.87
DESCRIPTORS	Black Community, Changing Attitudes, Community Organizations, Field Experience Programs, *Graduate Study, Masters Degrees, Microteaching, *Practicums, *Preservice Education, Program Evaluation, Teacher Attitudes, *Teacher Education, *Urban Teaching

ABSTRACT

This study describes and evaluates the first year of a 2-year masters degree urban teacher education program. The first year consists of four separate components, each of which is evaluated separately on the basis of previously stated objectives. The first component, Community Orientation and Study, involves a 6-week living experience in the inner city while working for the Young Great Society, a Black community organization. Evaluation of this component, according to questionnaires filled out by participating students, indicated that most objectives were met. The second component, a 1-semester microteaching course, was evaluated by questionnaires and interaction analysis of videotapes. Again, most objectives were achieved. The third component, Practicum in Teaching, a 1-semester teaching experience at an experimental school, was evaluated by questionnaires and classroom observation. The evaluation showed that most objectives were met. The fourth component, Practicum at the Pennsylvania Advancement School, was evaluated by questionnaire only. This was felt to be the least useful part of the program. (An appendix contains lists of objectives and questionnaires used in the evaluation.) (RT)

ED046878

An Evaluation of the Experimental Teacher Preparation Program in Urban Education

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August, 1970

SP004618

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PREFACE

The initial curriculum design for the Experimental Program was developed by Richard A. Gibboney and William W. Reynolds, Jr., of the Graduate School of Education in their proposal to the United States Office of Education in 1967. USOE financial support was of critical importance in the further development and evaluation of this design for teacher education.

Support within the Graduate School of Education was also essential. The assistance of Professor Frederick Gruber, Chairman of the Curriculum Committee, and the members of his Committee who reviewed the proposed program and recommended its approval to the faculty on an experimental basis, is gratefully acknowledged.

The encouragement of Dean Neal Gross and of William B. Castetter, who was Acting Dean when the program was first proposed, was very helpful. Any experiment in curriculum development has its frustrations and risks. One function of a Dean may be to encourage the selective taking of risks. We are pleased that Dean Gross believes that this is one aspect of his "role."

The evaluation design was developed by the authors with the able assistance of Professor Andrew Baggaley. Mr. Hyde and Mr. Langsdorf, doctoral students in curriculum and instruction, were responsible for

the collection and the analysis of the data in addition to assisting with the writing of the monograph. Mr. Lawrence Cross, a doctoral student in educational research and statistics, developed the computer programs for the analysis of the data on teacher behavior.

To my students in the Experimental Program, who cared enough to share their ideas and feelings with me, and who maintain a critical attitude toward this attempt to evaluate their experience, I trust that you will see images of yourselves, however fleeting, in the pages which follow.

Richard A. Gibboney
Associate Professor of Education
Director, Experimental Teacher
Preparation Program in Urban
Education

When progress is rapid, clinical and analytical science help one another. The clinicians tell the analysts what the latter have left out. The analysts need the most brutal reminders because they are always so charmed with their pictures they mistake them for the real thing. On the other hand, the analysts' generalizations often suggest where the clinicians should look more closely. Both the clinician and the analyst are needed. We ought to be sick and tired of boasts that one is better than the other. . . .

George C. Homans in
The Human Group

Chapter I

An Overview of the Experimental Program and the Monograph

A Perspective

The authors of this monograph are in the position of a pontillistic painter who is trying verbally to communicate the essence of his work to a listener who has not seen the painting. The painting is not words so its essential reality is lost. Each spot of color, should the artist try to simplify by breaking the painting into its parts, has not only a "separate" meaning but a "whole" meaning defined by the thousands of other spots of color which provide its visual context.

An essential reality of the program, for example, is diverse experience; an essential reality of the monograph is words and numbers. An essential reality of the program is the gradual, uneven, tentative articulation of significant problems and uncertain answers; an essential reality of the monograph is clear questions, data, and answers. The program is simultaneous and fluid; the monograph is linear and set. The program is concerned with cognitive, affective, and skill learning; the monograph is cognitive.

We must recognize that the program and the monograph have their unique reality and imperfectly reflect complex individual and social events which

are presently unknowable in any complete sense. Each complements the other. Each is one aspect of "truth." The danger, as Homans said, lies in ascribing exclusive power to either clinical or analytical "truth."

The Rationale of the Program

The most important element in the program, particularly during the early development phase, was its basic rationale--the rock-bottom assumptions and values from which all else flows. The two writers of the original USOE proposal had had earlier opportunities to review critically many existing teacher education programs--one from the university perspective, the other from the perspective of a state education department which was among the first to begin a "program approval" approach to teacher education. This experience provided the basis for several elements in the rationale.

Another antecedent to the rationale was the firm conviction that any program idea which was worth talking about was worth practicing. If the idea could not be acted upon and tested in practice, it was judged to have no operational power and hence useless for our purposes.

Another assumption reflected in the rationale was the judgment that there has been a regrettable lack of experimentation in teacher education. Having read over 50 evaluations of programs in liberal arts schools, state colleges, and universities, one of the writers was

struck by the similarity among most of them--a routine collection of routine courses without defined purpose and with no effort to monitor and control the quality of the program. No wonder teacher education is the source of so many bored sighs from both students and faculty.

The basic elements in the rationale for the Experimental Program are given below.

1. An effective teacher should be able to use a diversity of teaching tactics to achieve his objectives. The "one tactic teacher," whether this tactic be lecture or discussion, for example, is limited to a narrow and ineffective range of teacher behaviors.

2. The experiences in the teacher education program should be models of effective educational practice, given specific objectives, and, further, should introduce the student, through his own experience, to a style of learning and teaching which is probably quite different from the style experienced in his basic and college education. The process, as well as the more easily defined "content," should also be exploited as a potential learning experience. These experiences might possibly be more influential in shaping the student's teaching style than anything he was "taught" as part of his formal course experiences.

3. The process experiences should be shaped, for the most part, by the use of the inductive-democratic method which provides the student

with many opportunities to define problems, test solutions, and develop generalizations within a democratic teacher-student decision making process and the general program structure initially established by the instructor. (This structure could be, and sometimes was, altered by student initiative through use of the method described. See the chapter on microteaching for one example of this process.)

4. The effective teacher must try to know himself, exercise initiative in problem definition, and be inventive in his approach to teaching problems. The program should try to encourage and provide many opportunities for behavior of this kind.

5. Teaching would be defined as systematic behavior to achieve specific learning objectives; therefore, when a choice was to be made, practice in "behaving" was to be given primary value along with a formal critical review of that behavior; theory unrelated to that behavior, and general "talk about teaching," would be given secondary value.

6. "Realistic experiences," through simulations, practicums, and the use of the inductive-democratic method should characterize as much of the program experience as possible.

7. A deliberate effort should be made to develop and test a comprehensive evaluation design which would permit an evaluation of the program in terms of its objectives.

8. An effort should be made to continue to experiment with the basic

concepts of the program in the course of its development to avoid prematurely "freezing" the program in the preconceptions developed before actual experience with the program was gained.

An honest effort was made to apply and act on this rationale. The ideas in the rationale give the program its unique quality and provide for corrective feedback in process so that a more vital quality of experience is more likely to occur.

A Structural View of the Program

The structural elements of the Experimental Teacher Education Program in Urban Education are given below.

First Year

First Summer	Fall Semester	Spring Semester	Second Summer
Ed. 502 - Community Orientation	Ed. 503 - Microteaching Education and Academic Electives	Ed. 504 - Practicum in Teaching Electives	Ed. 505 - Practicum at the Pennsylvania Advancement School

Second Year

The second year of the program consists of full-time teaching as paid interns in the Philadelphia schools with University supervision.

Each of the experimental education courses will be described in detail in subsequent chapters when the objectives for each course, with the pertinent evaluative data, will be presented. A short description of each

course is given below.

Education 502, Community Orientation and Study, involves a six-week living experience in the inner city while working for The Young Great Society (YGS), a Black community organization. This course is described in Chapter II.

Education 503, Microteaching, is a one semester's course in which simulated teaching is done within the parameters of the instructional model described in Chapter III.

Education 504, Practicum in Teaching, is a one semester's experience in teaching in experimental schools (with the exceptions noted in Chapter IV).

Education 505, Practicum at the Pennsylvania Advancement School, an experimental school which is part of the Philadelphia School System, is a six-week experience which is scheduled during the second Summer of the program. This course is described in Chapter V.

The senior author teaches 502 and 503; 504 and 505 are taught by school district personnel within a plan developed by the school district and the senior author.

The program is a full-time, two-year master's degree program. Graduate School of Education (GSE) requirements stipulate that a minimum of 10 course units (30 semester hours) be earned for a M.S. degree in Education. Each of the experimental education courses, 502, 503, 504,

505, carry 2 course units of credit (6 semester hours).

Present GSE requirements also include a 3 hour essay examination in the teaching of a particular subject plus the ETS Advanced Test in Education which attempts to measure the student's knowledge in 5 areas of education (a proper distribution of courses in 4 areas may be substituted for the ETS examination effective during the 1969-70 academic year).

Admission to the Experimental Program

In addition to the minimum GSE admissions requirements of a GRE verbal score of approximately 550 to 600 and a GPA of 3.0, an effort was made in 1969-70 to broaden the admissions criteria so that a more diverse group of students could be admitted to the program. We were particularly interested in enrolling Black students and more White students from a wider range of class backgrounds.

The alternate admission procedure provided for an interview with two faculty members, one of whom represented the particular program for which the student was applying, a review of the transcript, a sample of the student's writing, taking the GRE (to be used in future evaluations of this policy), and approval of the GSE Committee on Instruction. (Students already accepted into the Experimental Program participated in the interviews in addition to the Director of the program and another faculty member.)

Under this procedure, 3 Black students and 1 White student were accepted. The diversity of the group was further increased by the enrollment of 2 more Black students and 1 White student from a state college through the standard admissions procedure.

In addition to using several admission routes, we require an interview of all applicants. The applicant is interviewed by a group of students currently enrolled in the program and by the Director. The applicant is also given the opportunity to meet privately with the students to ask any questions he wishes.

Through the interview we hope to get a better understanding of the applicant and subjectively try to assess his maturity, the quality of his extracurricular or work experience, and his reasons for applying to the program. We feel that the interview provides an opportunity for all parties of interest to ask candid questions and to make their own assessment of the answers. Admission by paper credentials only is less than adequate because it makes insufficient allowance for important personal qualities which may be important in teaching. The interview also permits some clarification of the expectancies of the applicant and of the GSE.

Descriptive Data on Students for 1969-70

In the Summer of 1969, there were 19 students in the program. One Black student left at the end of the Summer to pursue a Master's Degree

in another field when the company for which he had previously worked offered him a substantial raise and agreed to underwrite the cost of his graduate studies. One White student was accepted in the Fall of 1969. One Black student died in the Summer of 1970 after having been ill for most of the Spring Semester. Another student entered a doctoral program in the GSE in January, 1970. The number of active students was 17 through the Spring Semester and the Summer of 1970; 19 students were enrolled in the Fall Semester, 1969.

The average GRE verbal score for those admitted through the regular admissions procedure was 592 with a range in scores from 450 to 790.

The average GPA of those admitted through the regular admissions procedure was 2.6 with a range from 2.4 to 3.6.

Most of the students had graduated from liberal arts colleges in June, 1969, although 2 students had completed work in secondary teaching as part of their B.A. program.

The chart below provides additional descriptive data on the students.

Chart 1

College from which B.A. Degree was Awarded
for Students in the Experimental Program

College	Number	Male	Female
University of Pennsylvania	5	3	2
Cheyney State College	3	2	1
Oberlin College	2		2
University of Pittsburgh	2	1	1
Randolph-Macon Woman's College	1		1
Temple University	1	1	
Franklin and Marshall College	1	1	
University of Michigan	1		1
Lincoln University	1	1	

Financial Support

The program was supported by a total grant of $90,000 by the USOE through the EPDA in 1969-70 and the Bureau of Higher Education in 1968-69.

The Philadelphia Foundation has made a $10,000 grant for 1970-71 to pay students for their work as teaching assistants during the Education 504 Spring practicum at the West Philadelphia Free School. The individual grants vary because they are based on the amount of additional money the student requires to continue in the program.

The GSE, as part of its support program, has provided half-tuition scholarships to most of the students in the three groups which have been admitted through the Summer of 1970.

The USOE support was essential in beginning the program and in providing the critical $10,000 needed to buy video equipment and to begin planning and testing an evaluation design.

The Evaluation Design

Having had the valuable experience of "working through" the program with a small group of 8 students in 1968-69, in which program, administrative, and evaluation problems were identified, a course-by-course evaluation was begun with the community study course (502) in the Summer of 1969. A baseline videotape was also made in the Summer of 1969 to record entry-level teaching ability. Twelve students were randomly

selected to teach a lesson, not to exceed 10 minutes, focused on 1 of the 13 teaching tasks which provided part of the structure for micro-teaching (see the instructional model in Chapter III). The task used for the baseline tape was: "Teach A Concept in Your Field."

In December, 1969, the evaluation design given below was developed to systematize the evaluation of the program for 1969-70.

This design will permit the evaluation of the specific objectives for each course in addition to providing data on certain phenomena which extend over longer blocks of time, such as the responses to the questions on the self-growth questionnaire and the development, if any, of an indirect teaching style (described in Chapter III) which is a major objective of the program. Samples of teaching behavior from the Summer baseline tape, through the microteaching course, to the Spring practicum should provide acceptable data on whether or not an indirect style of teaching was attained.

The application of the Taxonomy of Teacher Tactics in the analysis of the microteaching tapes should provide evidence on another of our objectives: To train teachers who can use a wide range of tactics effectively.

The design also provides direct feedback on certain aspects of the program from an outside consultant and from the Sayre Junior High School

Evaluation Design for the Experimental Program

Data Sources	Time of Data Collection: Summer–Fall '69	Spring '70	Summer '70	Comparison Data Source
1. Interaction Analysis of Classroom Behavior-Baseline Tapes, Micro-tapes, Practicum				Flanders' Norms for Direct-Indirect Teacher Behaviors
Flanders' System	X	X		
Non-Verbal Categories	X	X		
Taxonomy of Teaching Tactics	X			
2. Pupil Response to Experimental Students				POSR Norms
POSR Ratings of Student Teachers		X		
Sayre Pupils' Reactions to 503	X			
3. Professional Judgments				
Consultant's Report	X			
Group Dynamics Leader's Report	X			
4. Student Evaluations of Program				Experimental Group Only
Course Evaluations				
502 questionnaire	X			Students in Other GSE Teacher Education Programs
503 questionnaire	X			
504 questionnaire		X	X	
505 questionnaire				
Self-growth Evaluation		X		Students in Other GSE Teacher Education Programs

pupils who served as pupils for some of the microlessons.

Given the difficulty in securing data that is not only objective but relevant to the objectives of the program, it was decided to secure several measures, if possible, on a given phenomenon. The effects of this decision can be seen, for instance, in the use of multiple measures to assess teaching behavior: interaction analysis measures in both simulated and real settings, the analysis of the non-verbal dimensions of teaching, the solicitation of the microstudents' perceptions of their microteachers, and the taxonomy of teaching tactics.

Although we prefer "objective data," we decided not to distort the program or the evaluation to get it. Responses on what our students feel and think about their experiences were sought because their responses are essential if certain objectives are to be evaluated. We believe that some individual bias is cancelled out because all of the students who shared an experience are replying to common questions and because we are usually interested in the modal response of the total group.

The Veldman POSR instrument, Pupil Observation Survey Report, is a standardized inventory which attempts to measure student evaluation of teachers by yielding scores on 5 factors such as Knowledgeable and Poised, Firm Control, and Nondirective. The POSR data are in sharp conflict with the general trend of our data, including interaction and analysis,

and will not be reported for the reasons given below. The relatively high means for the item scores in the norming sample may account for this conflict. Because of the high means there appears to be little possible differentiation above the mean because of the negative skewiness of the item-score distributions. It is possible, too, that the urban students in our sample, despite careful instructions, were confused by the instrument thus yielding spurious scores which do not reflect their "true" evaluation of the teacher.

We have sent our data printout to Dr. Veldman and asked him to comment on our findings. He suggested possible errors in the computer program. These were checked and found to be in order. We plan to try the instrument in several classes next year to ascertain whether or not this instrument can be of use in future evaluations.

Although this evaluation report may share certain elements in common with a research study, it should not be viewed as an experimental research report. The differences between this study, for example, and a research study which might attempt to assess the effectiveness of two different ways to prepare teachers are: 1) no effort was made to keep all aspects of the treatment constant in the Experimental Program; 2) some data were collected informally, through observation and feedback from students, so that operational modifications could be made as necessary without changing the basic objectives of the program; and 3) insofar as process and terminal

evaluation are necessary for the important purpose of program development, for which objectives provide the logical criterion measure, comparison groups are not essential although they may provide an important additional dimension to an evaluation. This dimension has been included in the study through the use of Flanders' norms for Direct and Indirect teaching behaviors which provide an interesting comparison between the behavior of our students and Flanders' large sample of experienced teachers. Another comparative dimension can be found in this study through the administration of parallel forms of 2 questionnaires (see Item 4 in the Evaluation Design) to a group of M.S. teaching candidates enrolled in other programs in the GSE.

The evaluation of this program will continue through the 1970-71 academic year for each of 3 groups of students: Group 1, which completed the two-year program, and graduated June, 1970; Group 2, which will begin its second year of the program, full-time supervised teaching, in September, 1970; and Group 3, which began the program in the Summer of 1970.

Planned changes in the evaluation design, resources permitting, include the pre- and post-program administration of the Minnesota Multiphastic Personality Inventory (administered to Group 3 in the Summer of 1970), interaction analysis, non-verbal analysis, and tactic analysis of teaching behaviors for each of the 3 student groups and comparison

groups, and GSE and school district supervisor ratings for Groups 1 and 2.

The following sections of the monograph will deal with the evaluation of each of the experimental education courses using the objectives for each course as the criterion measure. Data which bridges course boundaries, such as the self-growth data, will be presented either within the separate course analysis, or as a separate section in the report, as appropriate.

The specific manner in which the evaluation design was applied is set forth in the subsequent sections of this report in which the data are reported. To repeat this information here is unnecessary.

Chapter II

An Evaluation of Education 502 According to Its Stated Objectives

An Overview of 502

The Graduate School of Education News describes Education 502 as "a six-week summer course in community involvement" in which ". . .enrolees learn commitment is harder than it sounds."[1] The description is apt because this course was designed to give its members some direct exposure to the realities of ghetto life. Too often teachers enter the classroom with little more than a textbook conception of the social context from which their students come.

For 6 weeks during the months of July and August all of the students live together in a house in the Mantua section of West Philadelphia. As one student described the experience, "descending upon the big old empty house with our own cots, kitchen equipment, fans. . .we dug in for the summer."[2] To facilitate involvement in some of the phases of community life the group affiliates with a Black community organization, The Young Great Society.

The Young Great Society, or YGS as it is better known, is indigenous to Mantua, and has been active there for about 7 years. YGS was instrumental

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[1] GSE News, Philadelphia: December, 1969, p. 6.

[2] Ibid., p. 6.

in the early planning and implementation of 502. Mr. Webster Christman, one of the Vice-Presidents of YGS, is co-teacher for the course.

Most of the students worked in their field assignments for 8 to 10 hours each day. These assignments included such activities as devising and implementing recreational programs, working in housing renewal, assisting with the rehabilitation of drug addicts, working in the medical center, and working with emotionally disturbed children through a community mental health consortium. All of the students within the group were given the opportunity to select activities in which they wanted to become involved and were free to change their placements every 2 weeks if they desired provided these changes did not disrupt the program of YGS.

YGS did not represent the only avenue through which to become involved in the life of the community. The group found that its very presence in the area engendered interest from the local people. The initial community reaction was a resentment of primarily White "college do-gooders" in a Black community. As the Summer progressed, however, and students and community residents got to know each other on an individual basis, much of the antipathy abated, and a more positive awareness grew from the relationship. The students realized that, perhaps for the first time in their lives, they were the minority group. This realization in itself provided the basis for some of the learning and a concomitant change in the students' perception of their roles.

An important problem which this course forced the students to solve was how to create some sort of system which would enable them to be effective in a different environment without alienating the very people from whom they hoped to learn. The problem was compounded by the fact that while few of the students knew each other, the nature of the experience necessitated frequent and prolonged interpersonal interaction. Not only did the students have to contend with the strangeness of a new setting, but with each other as well which may have provided valuable experience in sensitizing one's self to the behavior of other people. Since the ability to deal openly with other people, within a prescribed setting, is crucial to the success of Education 503 (Microteaching), it was felt that the experience of living together during the Summer provided the basis for such behavior.

The student group included 19 people, of whom 5 were Black. For many of the students this course presented the first opportunity to live and interact with members of another race. This dimension of the course provided still another direction in which learning could proceed.

In an effort to force the group to construct and to evaluate its learning experience, the relationship to the senior instructor was deliberately ambiguous except as this relationship was clarified by the students through problem definition, direct questions, and discussion related to these 2 factors. This process presumably accelerated learning

about a new style of learning and assisted the group in becoming more independent from the instructor.

This course was the first in an integrated series of experiences which would, hopefully, culminate in the development of excellent beginning teachers whose teaching behavior would reflect attainment of the program's stated objectives.

Course Objectives of 502

Listed below are the objectives for 502 which will be used as the criterion measures for the course evaluation which follows. These objectives were formulated subsequent to the rationale described on pages 2-5.

A. "To increase understanding of the process of social change in an urban neighborhood by working within a Black community organization."

B. "To observe and understand more adequately some of the key elements of the inner city social environment such as recreational patterns and facilities, health services, housing, employment patterns, and job training programs; to learn about possible solutions to these problems and the obstacles which may impede the proposed solutions."

C. "To be exposed to the values and programs of Black and White community and religious leaders who are working for social

change in education, housing, health services, and job training."

D. "To learn about one's self through the shared perceptions of others sharing a new experience as a minority group in generally unfamiliar social terrain."

E. "To learn to share authority and responsibility for one's learning through more nearly co-equal status between teacher and student in which curriculum planning, administrative problems, and evaluation procedures are worked out with the participation of all persons affected."

F. "To learn more about the home and neighborhood backgrounds of school age students so that the school behaviors may be better understood."

Method of Data Collection and Summary of Results

To assess the effectiveness of 502 in meeting its stated objectives an open-ended questionnaire was administered to the 19 students on September 1, 1969. Fifteen returns were analyzed because 4 were inadvertently lost. The questionnaire was to be anonymous, but each student wrote his name on the questionnaire. This questionnaire consisted of 5 questions relating to areas of possible learning while in Mantua. The questionnaire permitted unstructured reporting of the students' experiences. Each of the students' narratives was subjected to content analysis

in order to trace commonalities among experiences and to assess the course's effectiveness in attaining its objectives. The categories for the content analysis were suggested by the content of the narratives, by the questions, and by the objectives. This procedure was deemed appropriate because of the relatively unstructured and individualized nature of the Summer experience.

The individual questions in the questionnaire do not precisely correspond to specific objectives. Responses received to each question, therefore, may relate to more than one objective.

The chart that follows is a summary of the data received in response to the questionnaire. The responses included represent the ideas expressed by the students as they responded to a particular question. Complete delineation of specific comments as they pertain to course objectives will be presented in the following section. In this chart responses are differentiated by race where inspection revealed qualitative differences. The number which follows each response category indicates the raw frequency of responses. The frequencies for the content analysis are not mutually exclusive.

Content Analysis of the 502 Questionnaire

Category of Response	f
1. Knowledge of the Community	
Increased	
White Students - 9 Responses	
Comments:	
Increased knowledge through personal contacts with people in the community	7
Got to know the problems of the community	4
Increased knowledge of the physical community and of individuals and their problems	1
Preconceptions were modified	3
Black Students - 3 Responses	
Comments:	
Increased knowledge of inter-group rivalry of Black community groups	1
Increased factual knowledge of the physical community	1
Indicated difference among Black communities	1
Increased knowledge through personal relationships	1
No Increase	
White Students - 2 Responses	
Comments:	
Reinforced existing preconceptions, knew community previously	1

Category of Response	f
YGS gave no access to the community	1
Black Students - 1 Response	
Comments:	
Reinforced existing preconceptions	1

2. Knowledge of Self and Others

Increased Knowledge of Self and Others

White Students - 9 Responses

Comments:

Living with others led to a continual evaluation of self and others	7
The inter-racial dynamics of the group facilitated knowledge of self and others	5
The evaluation session was the biggest input	9
Noted change in own and others' behavior	3

Black Students - 4 Responses

Comments:

The inter-racial dynamics were important	4
Learned about some of my personal limitations	3

Increased Knowledge of Self Only

White Students - 2 Responses

Comments:

Personal growth occurred	2

Category of Responses	f
3. Knowledge of Social Change in the Urban Community	
Increased	
Total group - 15 Responses	
Comments:	
Social change must be initiated from within community	5
Education is the best hope of advancing economic status and integration	5
Any approach taken must be a pragmatic one	5
Black groups must work with the White power structure	4
Methods for effecting change are complex	5
Group action is necessary for change to take place	3
Committed to social change, vague on how change might be effected	13
Little or no commitment to social change	2
Difficult to judge significant trends	3
Wary of Blacks selling out to White power structure	2
Best method is to infiltrate the system	1
Must work to change the entire social context, can't isolate one area and work on it, change agents must be innovative, providing resources and initiative	1
The group did not cause social change	3

Category of Responses	f
4. Awareness of the Effects of Working with YGS and a Complex Black Community	
Greater awareness of problems of Black teenagers	1
Difficulty of working with a fragmented organization	2
YGS should have been more open	1
Experience with Don Bruce (a YGS staff member) was rewarding	4
YGS is not entirely trusted by community, must build confidence	1
Lack of funds and misguided goals	1
Don't know, need longer exposure	2
Learned a lot about ourselves in relationships with YGS staff	2
Learned by our mistakes	1
Relationship with YGS gave group an identity in the community	1
YGS is one view, does not represent the total community	1
Couldn't become integrated into YGS structure, frustrating	2
Provided a common ground of interest for the university and Black community	1
Only kind of White help needed is "professional" expertise	1
Lost self-consciousness	1

Category of Responses	f
5. Strengths and Weaknesses of the Course	
Strengths	
Informal group interaction	3
Formal group interaction	14
Availability of reading material during the summer	2
Flexibility of work assignments	9
Affiliation with YGS	8
Living in Mantua	3
Friday sessions at GSE	2
No required reading	2
Informal community interaction	1
Diversity of background in our group	4
Variety of work assignments	2
Knowledge of Black community speakers	8
Teacher-student roles	4
Responsibilities of group	1
Breakdown of racial stereotypes	2
Weaknesses	
Not enough informal interaction with the community	5
Too short	9

Category of Responses	f
Should live deeper in Mantua	4
Speakers not coordinated	2
Administrative work with YGS	2
Group process over-emphasized	3
Lack of structure	3
Meetings too long	1
Better speakers	4
Too much structure	2
No emphasis on education	1
Little orientation to community	1
Not enough Black students in the group	3
Tougher living regulations	3
Ill-defined purposes	4
Student-teacher role not defined	4
Improvements Suggested	
White students should live with Black families	3
Live closer to the center of the community	1
Limit students to 2 projects during summer	1
Emphasize observation, not doing	1
Smaller group	6

Category of Responses	f
Broader orientation to the community	1
More contact with last year's group	3
Week spent in orientation was too long	2
Effort should be made to ensure a lasting commitment to Mantua	3
Increase the number of group evaluation sessions	3
Work with more community organizations	1
Full-time administrator for the program	2

Evaluation of Data as they Pertain to Specific Objectives

The preceding chart presented the content analysis of the responses to questions on the questionnaire. This section will relate the data to the attainment of specific course objectives.

Since Objective A deals with the general process of social change in the urban community, and Objective B is concerned with specific aspects of that process, the 2 objectives will be treated together. The objectives are:

A. "To increase understanding of the process of social change in an urban neighborhood by working within a Black community organization."

B. "To observe and understand more adequately some of the key

elements of the inner city social environment such as recreational programs and facilities, health services, housing, employment patterns, and job training programs; to learn about possible solutions to these problems and the obstacles which may impede the proposed solutions."

From the content analysis relative to Objective B it can be seen that 2 White students and 1 Black student did not feel that their knowledge of the community was appreciably increased during the 6 weeks. These 3 students represent 20 percent of the total group. All of these students were either familiar with Mantua or with what they considered an equivalent community prior to the Summer.

All of the other students, or 80 percent of the total group, felt that their knowledge of the community had been increased. Of the 12 students so responding, 9 were White. Seven of the 9 indicated an increase in their knowledge through personal contacts in the community. The following passages, written by 3 of these 7, are representative of this group.

1. "I met individuals in Mantua rather than ghetto dwellers. Those people that I met reacted to me and their neighbors as individuals rather than as a homogeneous group. I was reacting to different people, not to Mantua. I learned that I could never really know the community in the sense that I could pin it down and discern a common goal or motivation.

I learned about the problems of individual residents in Mantua, not about the problems of the residents of Mantua."

2. "In many of the older people, for example our nextdoor neighbor on Spring Garden Street, I sensed a pride and dignity expressed beautifully in quiet ways, in living 'decently' and cleanly despite limited material wealth. In the younger people I sensed a growing pride in their race, in their blackness, yet mixed with their pride I sensed resentment and even hatred, a hatred directed more at the White man in general than the White man as a person."

3. "One boy. . .involved in a gang which shot another gang's member, and was a victim of retribution, found particular solace in relating. . .the incidents which led to his paranoia. I was surprised to find that gangs were made up primarily of younger boys, 15 and 16. I was surprised to find gangs. I was surprised."

Of the 9 previously mentioned White students, 4 also stated that their knowledge of community problems grew. One such student whose comments typify these responses stated:

"Individual problems are linked to wider society. Insufficient economic resources within the community has prevented Mantua from developing itself. The initial failure of the contractor for the housing rehabilitation project demonstrated that the community resources require more time to develop and require more expertise."

In addition, 3 of the 9 White respondents in this category stated that their preconceptions of Black people dissolved. Although the following quotation was written by 1 student, it summarizes the sentiments of the 3.

"I became aware of many of my own preconceived notions about a Black community, and I found that most of them were fallacious. The first and most important fact that I learned was that the ghetto has as many positive aspects as negative ones. Secondly, I found in working with Black people, that the structure of their community is very complex. An example of this complexity is the family. In spite of the widespread ideas that Whites have about the Black family, there is a definite and very strong orientation toward familial association. All Summer, I perceived a tremendous feeling of loyalty and protectiveness among siblings and even more distant relations. I observed this most readily while working on the Playstreet, where the older children constantly care for and guide their younger brothers, sisters, and cousins. This loyalty extends even to close friends. It seems that the whole area is like a large family; something I had never observed in the neighborhoods which I had previously lived in."

Of the 12 students who stated that their knowledge of the community had increased 3 were Black. These students felt that while they had many common experiences with Mantua in their backgrounds to which they could

relate, they did learn much more about the problems unique to Mantua. Their responses are typified by 1 of them who said,

"I feel that I learned, as Herman Wrice (President of YGS) said, that there must be immediate programs to help all the residents of the ghetto and not just a few. . .One of the most discouraging things that I recognized in Mantua was the bickering between rival Black organizations for control of the community. . .This is something that I knew about long before I came to this program but to see it in actual operation at such close range was still a very sickening and frustrating sight to me as a Black man."

The responses indicate that by the end of the Summer, 80 percent of the students increased their understanding of an inner city environment. The remaining 20 percent felt that they possessed an understanding of this environment prior to the summer.

With respect to Objective A, 2 people were not particularly commited to social change before the Summer. The other 13 students believed that they were committed but they felt vague about how social change in an urban community might be effected. By the end of the Summer, however, all 15 students were able to state some idea of how social change in an urban community might be effected. The responses were variable. Ideas most frequently cited were: change must be initiated within the community, the approach must be pragmatic and involve the White power structure,

education is important to higher economic status and integration, and group action is necessary for change to occur. The following passages taken from the responses of 4 students provide additional detail on some of their ideas on social change.

1. "In regard to 'social change' I must first state that I had no intention of getting involved in it. When I entered this program, my only objective was to become the best teacher possible within my own limitations. As long as I could 'do my own thing' in my classroom, the community could struggle without my involvement. . .A community organization dedicated to social change must expand operationally to meet the rising demand and expectations of the community in which it functions. In order for such expansion to occur, the organization must work with 'the system' and with 'the system's' money, but in the meantime convince the community that it is not being 'sold out'."

2. "I learned that if YGS succeeds in Mantua, the reasons will lie not in idealism but in shrewd politics, careful planning, and links with people ready and able to help, officially as well as unofficially, on local, state, national, and international levels. Mantua is one of the few (and probably the only) working models of a community raising itself by its own bootstraps in efforts to meet housing, education, employment, job training, and community-organization problems. There's a good chance that what worked for the poor, out-of-work, unskilled, poorly educated,

and powerless in Mantua will work for people with the same problems in Watts, Ulster, or Hong Kong. The idea is to see social change in Mantua in the context of the wider society and judge the effectiveness of YGS' actions on the larger scale."

3. "White resources must certainly be tapped in this drive for change, but Blacks must do their own changing on their own terms, without the unnatural burden of White values."

4. "Social change in order to be successful must be initiated from within the urban community. Grassroots organization must be the spear-head to successfully changing the community. The Community School and the Medical Center, Halfway House, and the Boys' Academy are examples of successful social change projects initiated by community members for residents of the area. Such local activities are more successful than any projects which the city may have organized."

This perception of the necessity of community initiation of social change is further reinforced by the statement of the following 3 students that any social change caused by them in 502 was negligible and completely secondary to their learning about the urban environment and themselves as change agents.

1. "I saw myself only as a reference point. My responsibility was to help in any manner that YGS needed. It was not my responsibility to initiate, but to support and perhaps make suggestions. The success of YGS has been because it is an indigenous community organization. It must continue to be so, with Black people having total power in the organization

and running of the offices and activities."

2. "While attempting to work with YGS this Summer, I generally felt uncomfortably useless and functionless, . . .and a frustration due to the lack of tangible results from what little I was able to give (or thought I had given). However, on retrospection I feel that I learned perhaps more as a result of frustration and discouragement than I'd have learned if YGS had artificially planned activities for me to do just so I'd feel welcome and useful."

3. "There are 2 regions of possible effect I or the group had with YGS. The first is our effect on the community and social change. We had little or no effect at all in this area. Things did not get done because of us. Our task was to learn about ourselves, each other, and the problems of urban life. This was accomplished to a great extent. Whatever was done, pragmatically done, was because of YGS and not us. The second area is our self-awareness and the personal relationships we established with the YGS staff. This was extremely rewarding for me. I have learned a lot about YGS, urban life, and myself from them. These relationships will hopefully lead back into the community so that I may eventually have some effect in social change."

Five students of the total group briefly mentioned that education is the best hope of advancing economic status. None of the students elaborated on this idea.

While the responses show that there was no consensus as to how social change in an urban community could be effected, all students indicated an increased understanding of at least one aspect of social change. We conclude that Objective A was achieved.

Since the content analysis revealed that 80 percent of the students had increased their understanding of an urban community, we conclude that Objective B was achieved.

Objective C for course 502 was: "To be exposed to the values and programs of Black and White community and religious leaders who are working for social change in education, housing, health services, and job training."

To a large degree the attainment of this objective is inherent in the structure of the course. In addition, several speakers, representing different aspects of social change work, were invited to address the group during the evenings. These speakers included teachers working in urban high schools, clergymen working on civil rights, architects involved in urban renewal, and doctors attempting to improve medical services in the Mantua community. The students, too, when they met someone whom they thought would be interesting to the rest of the group, invited him to the house for informal discussion.

In speaking about these discussions, 8 students, or 53 percent of those responding to the questionnaire, mentioned that the evening meetings

with community speakers were of value. Furthermore, 11 of the students, 73 percent, indicated that the flexibility and variety of their field assignments facilitated exposure to a wide range of programs and community leaders working in diverse areas.

These responses were collected from the responses of the students on the strengths and weaknesses of the course. Since these lists in most cases were comprised of fragmentary remarks, few lend themselves to citation.

Two students' comments are illustrative of the more brief statements by 8 students who listed the speakers as a course strength. One said: "The selection of speakers gave us a good background in the different methods of effecting social change in an urban school and/or urban community." Furthermore, "the variety of work assignments available permitted some students to discover which aspects of community work they were most interested in and suited for, (therefore) the flexibility of the scheduling. . .allowed the students to fulfill their educational and orientational needs. . . ."

The other stated: "The meeting of several community leaders and interesting community citizens was. . .very meaningful, (for) we were put in situations in which we came into contact with individuals whom we normally would not have met. This provided opportunity for learning about other people." Several also stated that meeting with community

leaders legitimized the group's presence in the community, and facilitated participation within it.

Perhaps the aggregate reaction to these experiences is best summarized by another of these 8 students who felt that his meetings with various community leaders, whether under the aegis of YGS or through casual encounter "Provided the students with a working identity to start off with in the community and. . .this identity or base was a valuable part of the program. Without that identity I would have felt very awkward in the community."

Four students, or 27 percent, differed in their reactions from those mentioned because they felt that the speakers could have been of higher quality. Two of the 4 would have preferred better coordination in the scheduling of speakers. Since these students did not elaborate on their ideas, it is not possible to include illustrative comments.

One may conclude that the very nature of the course provided the students, whether through flexibility and variety of work assignments or through encounters with community speakers, an exposure to a range of values, programs, and leaders within a particular Black community. The data discussed above indicates that the students felt differently about this exposure in that 53 percent stated positive feelings about the speakers with 27 percent stating that better speakers could have been chosen. Also 73 percent expressed positive feelings toward their work

assignments which exposed to Black and White community leaders. This objective was attained although no specific learnings can be attributed to the attainment of this objective because it required a minimal level of interaction, mere exposure to the values and programs of certain community leaders.

Objective D of course 502 was: "To learn about one's self through the shared perceptions of others through an experience as a minority group in generally unfamiliar social terrain."

All of those completing the questionnaire indicated that the course was of some value in increasing knowledge of themselves. In addition, all but 2 responded that their knowledge of others within the program had also increased. A heightened awareness of one's self and others in the group is judged to be an important factor in microteaching.

Seven, or 47 percent of the students, felt that the very fact of living in proximity to others in the group led to a continual evaluation of one's self and others in the program; they also indicated that they had been aware of discernible change in both their own and others' behavior.

In an effort to make student evaluation a positive learning experience, the Summer culminated in an all-night evaluation session, led by the instructor, with all persons in the group participating. During this session each person's work was evaluated by the group in accordance with certain ground rules worked out by the instructor and the person who was to lead the group

sessions in the Fall. Nine people, or 60 percent of those responding to the questionnaire, indicated that this was the biggest single factor facilitating their self-awareness and their increased sensitivity to other people. Furthermore, responses indicate that this session was a more systematic outgrowth of several informal sessions on group "gripes" and problems held at the group's initiative during the Summer.

The following statements, selected from the questionnaire, are typical of the responses received. The complete statements of the entire group are on file and available on request as are all other data.

". . .My increased knowledge of myself and my peers were the most enlightening aspects of the program. . ."

"Through informal group dynamics, and the 1 formal session, I realized an enormous amount about my own personality and character which I had never before consciously comprehended. I found that I do have the ability to relate to a group; a fact which I had often doubted. I understand now that my background has had an unwarranted effect upon my behavior, and that my life is torn between 2 worlds. I see that in the near future, I must make a decision as to how far my commitment to the urban community goes. Most importantly, through constant interchange of ideas and thoughts with the people around me, I found that intellectual and emotional honesty can be very helpful. It is because of the unusual amount of candidness which people both in the community and in our program

displayed this Summer that I was able to discover these things about myself. . .Thus, I learned that an open mind is the greatest asset in any societal endeavor, and, normally, people can change."

Three of the Black students indicated that their most significant learning came from being made aware of the way in which others perceived them. Often there appeared to exist a wide discrepancy between the way an individual perceived himself, and the aggregate perception of the group in relation to him. In many cases, students found that their "shared perceptions" made people aware of their own limitations, and precipitated a tendency to regard people as individuals. Thus any tendency toward stereotypic judgment was also reduced.

Commenting on this aspect of his self-growth, 1 of the Black students said, "I feel that I made great strides in the area of knowledge of myself and others. I probably had my greatest achievement in this area. For the first time in my life I think I came to realize and accept the fact that I had many limitations and that there were many things that I just could not do very well. I learned that a lot of other people were a lot better in areas that I had previously considered myself quite competent in. An example of this would be my ability to make friends with new people. I found myself to be painfully inadequate at this very necessary skill. Before this Summer, I had always considered myself adequate at this art, but after watching other people I realized that I'm painfully

inadequate and terribly cold and matter of fact with people until I have been around them quite a long while. I have also learned that I am quite a poor judge of people, at least initially I usually am. My first impressions more often than not turn out not to be lasting impressions. I blame this on my eagerness to categorize people instead of reacting to each person as an individual. Another thing I learned was that my impressions of myself and what other people think of me appear to be drastically different. At the sensitivity session that the group had I was amazed that people thought of me as a strong individual who knew what he wanted, because I have never thought of myself as such a person, certainly not as a particularly strong person."

Nine members of the group felt that the inter-racial dynamics were an important factor in their own learning. This viewpoint was shared equally by both the Black and the White students. The commonality of responses between Blacks and Whites in this area probably comes from the fact that for each group the Summer in Mantua represented their first opportunity for sustained interaction with members of another race.

One of the Black students in the program said, "I am a strongly opinionated person on many issues. I became more aware of just how opinionated I am. And it is my opinion that, although 1 of the purposes of the Summer program may be to induce self-analysis, criticism, and change, witnessing changes in others was more valuable to me. The community

comprised of the students in the house provided an interesting and important study for me. Unfortunately, it is probable that the education of Black children will be entrusted to Whites for some time to come. Through study of the people in the Summer program I can better understand what my co-workers are like, what changes they are capable of making, and even how environmental factors affect their personalities."

Still another Black student intimated that it was obvious that many of the Whites in the program had never before interacted with Black people.

"The Whites in the group appear to have loquacious tendencies which place all in a friendly atmosphere. Students A, B, C, D, and E had this quality, and communication seemed very easy. I think I really got to know a little bit about each 1 of the White students in the program, but especially about the 5 I mentioned above. For many Whites this was their first encounter with Blacks and it showed."

However, "Given that the students in the group possess varied backgrounds, I have always been amazed at how we applied the necessary grit to accomplish our task."

The learning that followed from inter-racial interaction was not limited to the Black students. The comments which follow are a representative sampling gleaned from the responses of the 5 White students

who discussed racial dynamics.

". . .I had read a great deal about the Black community, and unconsciously, or maybe consciously, I'm not sure, I tried to plug into a broader framework, the experiences of the Summer."

". . .Originally the color of the residents of the community seemed most noticeable, but later the personalities of the people I met became foremost. . .As I became more involved in activities this Summer, I was conscious first of personality, rather than color."

"I came to Philadelphia with apprehensions about my ability to relate to an inner-city situation. Being a middle class White, whose contact with Blacks had been limited and having spent most of my life in small Ohio towns, would I be able to understand the problems of being Black and living in the inner city? Would my sex be a drawback? Being quiet and reserved, how would I relate to the people and the kids, in particular, with whom I was working?"

"Six weeks later and the 'experience' behind me, these questions have in part been answered. Coming from a rural environment, I have found, has made me sensitive to the physical environment. I know the liberating and humanizing effect trees, fields, birds, crickets, and unpolluted air and water can have. It amazes me how people can endure an environment of bleak apartment buildings, gunning motors, shattering glass, smelly gutters, polluted water and air. Another thing I realized

while in Mantua is that I can leave; for me there is an escape. For the others there is none."

". . .Whether or not I was able to overcome the racial barrier and relate with Blacks is difficult to say. If answered in terms of this Summer, the answer is yes."

It seems valid to say that all the students learned to cope with what they term "inter-racial dynamic." In dealing with the situation most seemed to have learned a great deal, and were apparently better able to communicate with persons of a different race than they previously had been.

Perhaps the best statement, for those who viewed the Summer as a valuable experience, is illustrated by the passage quoted below, taken from 1 of the students' responses to the question.

"This past Summer has been the greatest period of self discovery I have ever had. I learned a great deal about myself, my attitudes, my goals, and my motivation. I feel that the real value of 502 was in the communal living that made these discoveries possible for me as well as for the others. I owe a great deal to the other people in the house for their honesty and their willingness to be open. I learned how to recognize and share others' perceptions of me and my perceptions of them. I learned to bring latent attitudes and feelings to the surface, to cope with them and learn from them. I still cannot help making initial judgments of people, but I think I am able to leave those judgments open-ended.

With every new discovery I or others made, I had judgment-after-judgment shattered so that we came to know each other honestly and without fear of one another."

The responses reflect a consensus on the part of the total group that self knowledge increased because of shared perceptions whether through the daily routine of living with other people (mentioned by 47 percent of the students), by inter-racial dynamics (mentioned by 60 percent of the students), or by the evaluation session (mentioned by 60 percent of the students). Since these categories are not mutually exclusive, a single student may have mentioned all 3 avenues.

In listing the strengths and weaknesses of the course, all but 2 of the students listed the formal and informal group interaction as a highly positive aspect. This relates directly to Objective D. Their reasons for including this interaction under the strengths of the course hinged on their collective feeling that it prompted an evaluation of themselves and others. Two students were more specific and indicated that the interaction occurring within the group reduced the tendency to think in terms of racial stereotypes.

One woman cited ". . .group living, cooperating," and "sharing of experiences," which she felt prompted "spontaneous interactions within (the) group all the time. . ." Another said that "informal interaction within the group," combined with "dinner together every night," acted to

bring about a pooling of perceptions about each other. Finally then, "the emphasis placed upon group living, group resolution of problems pertaining to it. . .and the entire effort which was made to permit the group to reach its own level and direction, led to the evaluation of interpersonal relationships within the group." In other words, "the openness of the group throughout the summer. . .and the (evaluation) session proved valuable experiences in understanding others and one's self."

The degree of inner-group involvement was so strong that 2 students said it should, if possible, be de-emphasized in the future. Yet 3 other students suggested that the size of the group should be reduced and the duration of the experience lengthened, to foster an even more intensive interpersonal factor. Still other students, who felt that the group size should not be decreased but that interpersonal dynamics should be made more paramount, suggested increasing the number of formal evaluation sessions.

These data substantiate conclusions drawn from data presented earlier pertaining to this objective: All of the students acquired a degree of self-knowledge previously not possessed, and that a majority of students believed that their ability to understand other people had improved. In September of 1969 the Graduate School of Education asked Dr. Norris L. Haynes of the University of Pittsburgh to assist a faculty committee which

was beginning a study of all teacher education programs at the GSE. In acquiring the information necessary for his review, Dr. Cogan interviewed several groups of students during his three-day visit to the University. His remarks, as they relate to the Experimental Program in Urban Education, will be treated elsewhere in this study. (For a complete copy of Dr. Cogan's report refer to Appendix 2.)

One portion from Dr. Cogan's report should, however, be included here because it pertains directly to the objective under discussion and supports conclusions already drawn. In addressing himself to the differences between the students enrolled in this program and those in other teacher education programs at the Graduate School of Education Dr. Cogan states, "These students were more mature than other students in their self-knowledge, more secure in their status as future teachers, infinitely more analytical about their response to questions. . .Why these differences? One reason was probably the deeply satisfying experiences and the important learnings the experimental group derived from their Summer in the urban ghetto."

Although we realize that our data are qualitative, and that variables other than those being studied may have influenced student responses, the weight of the data would indicate that Objective D was achieved by a large majority of students.

The philosophy inherent in Objective E, responsibility for one's

learning, permeates each course in the Experimental Program. Education 502 may be viewed as the initial effort toward the attainment of this objective. Inferences relating to this objective may be made from the lists of course strengths and weaknesses.

Objective E was: "To learn to share authority and responsibility for one's learning through more nearly co-equal status between teacher and student in which the curriculum planning, administrative problems, and evaluation procedures are worked out with the participation of all persons affected."

The comments concerning strengths and weaknesses show that students were allowed to and did participate extensively in these aspects of the course. General administrative and program problems provided the focus for the two-hour group sessions which were usually held each Friday at the Graduate School of Education. The one exception to this was the lengthy student evaluation session conducted at the house. The sessions at the GSE were intended as practical applications of Point 3 of the program rationale which states: ". . .process experiences should be shaped. . .by the inductive-democratic method which provides the student with many opportunities to define problems. . .within a democratic student-teacher decision-making process. . ."

Fourteen of the 15 students, or 93 percent, cited the sessions at the GSE as a positive aspect of the course. Three of these students

stated that they felt that the unstructured and student-initiated group discussions at the house were a waste of time.

It is essential to the inductive-democratic method that flexibility in the structure of the course be maintained so that the students and the instructor may alter it as necessary. Students react differently to this "lack of structure". Three students, or 20 percent of the group, felt uncomfortable with what they felt was an undefined student-teacher relationship and an ill-defined course purpose. Conversely, 9 students, 60 percent of the group, felt that "this lack of structure" as exemplified by "free choice of working assignments and the freedom to change" were definite assets.

Only 2 of these 9 students elaborated upon these perceptions.

"The flexibility of scheduling. . .allowed the students to fulfill their educational and orientational needs to a greater extent than a more rigid schedule. . .the organizational responsibilities, etc. given to the students as a group of students with similar needs."

"The nonstructured nature of the program. . .gave us a chance to experiment and grow."

In contrast to the above, 2 students, or 13 percent of the group, felt that the course had too much structure and cited this as a weakness.

Thus, 60 percent of the group felt positively about this "lack of structure", 20 percent felt negatively about it, 13 percent would have

preferred less structure, and 1 student, representing 7 percent, did not indicate any feelings on the matter.

Also seen as strengths by 3 students were "The emphasis placed upon group living, group resolution of problems. . .and the entire effort which was made to permit the group to seek its own level and direction" and "The beginning of exploring the basis for the 'roles' of teacher and student, and an attempt at more meaningfully defining them and rendering them less limiting."

The last point, overcoming the usual teacher-student role constraints, an important part of Objective E, was considered a definite strength by 4 students or 27 percent of the group.

Ninety-three percent of the students felt that the informal group planning sessions at the GSE were worthwhile. Sixty percent cited "lack of structure," flexibility in working assignments, and opportunity to alter the course as strengths.

Only 27 percent of the students specifically cited the effort to work out new teacher-student relationships as a strength. Twenty percent of the students felt uncomfortable with the ambiguous teacher-student relationship and with what they felt to be an ill-defined course purpose. Two students, or 13 percent, indicated a desire for less structure.

Since only 27 percent of students felt strongly enough about the effort to work out a more co-equal teacher-student relationship to mention

it in their responses, and since 20 percent felt "uncomfortable" in this new relationship, Objective E was not met although 93 percent felt that one aspect of this relationship, the GSE planning sessions, was worthwhile.

Objective F reads: "To learn more about the home and neighborhood backgrounds of school age students so that school behavior may be better understood."

Only 3 placements within 502 enabled students to formally interact with neighborhood children: the playstreets, the McMichael School tutorials, and an additional recreational program at 1 of the YGS offices. It is assumed that some students daily encountered children as they traveled around the community. Since such informal interaction was largely a chance factor and since the learning outcomes of these encounters are extremely subjective, it is impossible to state with any precision how many experimental students interacted with students on a prolonged basis, what the basis for the interaction was, or what the possible benefits of the interaction were. There are no data to corroborate or to negate this assumption. Only the data from formal interaction with children can be analyzed here.

Eight students in the Experimental Group worked on playstreets at some time during the Summer. Their duties were primarily supervision of games and accompanying the children to free swims at the University of Pennsylvania

pool. All 8 of these students mentioned an increased awareness of community gang problems and the problems of Black teenagers as a result of their work on these streets. Two of these 8 students, the only ones providing any comments stated the following:

"The younger children seemed in general very affectionate, curious, intelligent, well-behaved. Since no deep-seated prejudice or resentment has had time to reach them, they seemed to notice color differences in people merely as a curiousity."

"The children and adolescents follow a daily pattern, just as the adults do. Everyday the children play in the streets and sidewalks (this has become their playground) while the older ones attend summer school. The most popular activity is playing in the water from the fire hydrants. The children seldom go outside Mantua or even play with children from a different block. The adolescents are never seen during the day. They appear in the evening when they congregate on the streets. Their activities are largely determined by the gangs. The gang structure is so well established in the community that few lives are not affected by it."

There are no data available on the 3 students who worked during part of the Summer at McMichael School which pertain to their learning about children. This is true also for the 5 students who at sometime worked at the additional recreational programs at YGS. All that can be said with certainty is that these students did have an opportunity to interact with children.

It is impossible to make any conclusions about whether or not this objective was achieved. The only concrete evidence of its attainment comes from the responses of the 8 students who worked on the playstreets.

Additional Course Data

There are 3 additional sources of data which, because they pertain to the course as a whole and not to specific objectives, were not included in the previous section. These sources are 2 letters written by Mr. Herman Wrice, President of YGS, 1 to Dean Neal Gross and the other to Mr. Gustave Amsterdam, President of the Albert M. Greenfield Foundation. The first of these letters was unsolicited, the second was written in support of a request for funds to assist students in the Experimental Program. The third source of data is the report submitted by Dr. Morris Cogan to the Graduate School of Education, University of Pennsylvania.

In an excerpt from his letter to Dean Gross, Mr. Wrice said:

"Although they may have thought that I sincerely believed their effort small and ineffective, I would like to take this opportunity to tell you now, and Dr. Gibboney and his students later, that I appreciate their work and am impressed with them both as a group of future urban teachers and as individuals with initiative. They did a bang-up job."

Mr. Wrice further elaborated upon his perception of the experimental students in the following passage excerpted from the letter to Mr. Amsterdam:

"As a personal observation, I have met with sad frequency people of the

highest motivation--in teaching and other areas of the urban crisis--who are being sent out with tools so pitifully inadquate that good intentions are doomed to break on hard realities. By contrast, in the case under review, I have seen Dick and his team working with two classes of the Experimental Program by now, and I like what I see: their grasp of, and approach to realities, far from blunting idealism and imagination, through attention to pragmatic necessities and nuts and bolts responses, are producing the kind of people who will 'make a difference' in teaching as Neal Gross has put it."

Several comments from Dr. Morris Cogan's report seem relevant here. Dr. Cogan had no acquaintance with this program, or with the particular course under discussion, prior to his being engaged as a consultant to the Graduate School of Education. His views are valuable in that they come from an expert outside observer.

"It is my strong impression that the experimental program for the preparation of urban teachers was--at the moment of my interview--at a very high level of morale--for both students and faculty. In years of visiting colleges and universities on a variety of missions, I cannot recall evaluations as unanimously positive, or responses as profoundly examined as those I heard at Penn. On any scale of student responses I could devise, the experimental program would rate at the very top. In contrast, as I have already indicated, other programs evoked mixed reactions

(many of them strongly negative). Why these differences? (One reason was probably the deeply satisfying experiences and the important learnings the experimental group derived from their Summer in the urban ghetto.)

"These students were more mature than other students in their self-knowledge, more secure in their status as future teachers, infinitely more analytical about their responses to questions. Their relationship to me and to other professors was already that of colleagues. They had given a great deal of themselves during their residence in the ghetto and they therefore openly demanded a great deal of their professors. They were the most autonomous students I have encountered, and still the best able to relate to others in problem-solving. If they remain in teaching they might make superior contributions."

"It would be naive to attribute all of these outcomes solely to their Summer of residence in the city. But it would be equally naive not to attribute a significant portion of such outcomes to their community experiences. These students were reality-based, and on such a base a teacher can begin to build a professional life."

"At this point it may be necessary to ask whether a critical variable in the Summer processes was not the fact that the community they spent their Summer in was a Black, urban, explosive ghetto, and that in it they created a good way of life and survived--with profit and self-respect.

The answer to this must be in part 'Yes.' For example, one Black student indicated that the Summer was not as educative nor as illuminating an experience as it was to the Whites. He had grown up in a similar ghetto. Nevertheless, I would want to consider whether or not the reality of the experience and the nature of the leadership and help these students got from GSE were not also important variables. The experimental group talked about their Summer in the community in somewhat the same way that medical students talk about their introduction to the hospital. They reminded me forcibly of the way the students in other programs responded to even the quasi-reality of microteaching and videotaped records of classroom interaction. In sum, the group of students in the experimental Summer may have taught us again an old, old lesson--that the education of the professional must begin in and constantly return to the field of practice."

"I would, therefore, recommend that the programs of teacher education at GSE be reconstituted around an inductive principle--that the students start from carefully programmed, intense, reality-based experiences of useful duration in schools and communities, and that their formal instruction relate to and constantly return to such experiences."

Changes in 502 Evaluation Procedure for Summer, 1970

To more thoroughly assess the quality of the course in future years, and to more precisely determine its effects on the students, certain changes in data collection have been made. In large part these changes

were suggested by problems encountered in the writing of this study.

In order to determine more precisely the initial attitudes of the Third Group, beginning in the Summer of 1970, a new evaluation procedure was developed. The first part of a pre-post attitude and information inventory, developed by the authors, was administered on the second day of 502 with the post-part administered at the end of 502. This questionnaire was geared both to the objectives of 502 and to the specific areas where knowledge should be increased during the Summer. In addition to the questionnaire, both the MMPI and the Strong Vocational Inventory were administered during the first week of 502. These data will be compared with data secured from a second administration in the Summer of 1971. In addition, the MMPI was administered to a comparison group of University of Pennsylvania Graduate School of Education M.S. in teaching candidates at the beginning of their program in the Summer of 1970. These data will be analyzed in cooperation with Dr. Barton Cardon of the Psychological Services Division of GSE.

Conclusion

Examination of the summary statements following the analysis of data pertaining to each objective reveals the following:

1.) Objective A, related to an increased understanding of the process of social change, was achieved by all the students although there was no consensus of how best to achieve such change.

2.) Objective B, which related to the observation and understanding of key elements of an inner city social environment, was achieved by 80 percent of the students during the Summer, the remaining 20 percent having achieved that understanding before the Summer.

3.) Objective C, exposure to the values and programs of community leaders working for change, was achieved by all of the students in that such exposure was inherent in the experience. Fifty-three percent of the students indicated positive feelings about leaders met outside their formal placement, while 73 percent expressed positive feelings about leaders encountered in their field assignments.

4.) Objective D, the perception of self-growth, was achieved by all of the students although such growth was attributed to different aspects of the Summer program. For example, 60 percent cited the inter-racial dynamics of the group as a self-growth factor while 47 percent cited the daily routine of living with other members of the group.

5.) Objective E, which related to assuming responsibility for one's own learning and to developing a more co-equal teacher-student relationship, was not achieved for reasons which can be found in the concluding paragraphs of that section.

6.) Objective F, concerning learning about the home and neighborhood

backgrounds of school age students, has only limited and inconclusive data pertaining to it and could not be evaluated.

Two objectives of this course, Objectives D (self-growth) and E (responsibility for one's own learning), are recurring program objectives and are treated in the chapters which evaluate courses 503, 504, and 505.

The remaining 4 objectives of 502 are terminal. They do not continue in any formal sense throughout the program. They were intended to provide experiences from which the student might base part of his conceptions about his role as a teacher in the inner city, and to give him some knowledge of the social context in which his students function. The data indicate that Objectives A, B, and C were achieved; the data were not sufficient to evaluate Objective F.

Chapter III

An Evaluation of the Microteaching Course According to its Stated Objectives

Introduction

This course, Teaching Strategies for Urban Secondary Schools (Education 503), was designed to provide students with some of the basic attitudes, skills, and concepts judged to be essential to effective teaching. It was based on the assumption that teaching is deliberatedly chosen behavior to achieve specified learning objectives. It was also assumed that the development of the appropriate attitudes, skills, and concepts could best be achieved by the instructor's use of the inductive method under simulated teaching conditions. Microteaching was chosen as the simulation vehicle. This course, therefore, employs the quasi-reality of microteaching because of the belief that this approach permits the development of teaching skills in a supportive climate and facilitates the development of a rational teaching style. By reducing the number of confounding variables such as class size, length of the lesson, and kinds of lessons taught, it was believed that the course could focus on teaching skills and learning more about a professional role without also dealing with the large number of "intervening variables" present in a "real" classroom situation.

Description of the Microteaching Course

This course provided a simulated experience in teaching for one semester. Each student devoted about 15 to 20 hours per week to microteaching including planning, teaching, critiquing of the lessons taught, and voluntary reading. All of the lessons were videotaped to facilitate feedback to the student. A specific teaching task, described below, provided the focus for each microlesson. In the first part of the course the lessons were limited to 7 minutes and were individually planned and taught; in the later phases, the lessons were team-taught and ranged from 10 to 20 to 45 minutes or more depending on the student's sense of his progress, his developing idea of what learning and teaching are, and his unique assets and liabilities in teaching skills as seen by himself, his peers, and the instructor.

An instructional model was developed and followed closely throughout the course. The basic elements of the model consisted of a number of specific large group imputs many of which influenced the classroom climate, the 13 teaching tasks, the key elements in the microlesson, critiquing criteria and process, and a "new trial" phase at which time the basic process was repeated within the structure of the model. (The model is described in detail in the next section.)

This model of microteaching is different from the component-skills approach developed by Dwight Allen and associates at Stanford University.

In the Allen[1] approach, certain skills of teaching such as reinforcement and non-verbal cues, are usually demonstrated and practiced in lessons as discrete elements. This approach has the advantages of a sharp focus for the student and the instructor, and reduces the chance of elements which are extraneous to a particular skill obscuring this focus.

The model used in 503 is holistic: skills, attitudes, and concepts develop from the critiquing process which is based on "true teaching" behavior; that is, systematic behavior by the teacher to achieve a specific learning objective. This process is also shaped by the use of the inductive method and the classroom climate which requires the student to define objectives for his lesson and to choose a "means" which he believes will achieve his objective (s). In this way, the focus and practice on particular skills is integrated within the context of a lesson. Extraneous factors are partly controlled by the length of the lesson and the fact that it occurs in a laboratory environment; initial focus is provided by the assignment of a teaching task (Appendix 7) for each lesson such as "Teach a Concept from Your Field." The student develops his lesson from that point with little other than clarification of the task by the instructor until his lesson is taught and critiqued.

An important component of the microteaching model is the critiquing of the microlesson. To accelerate the development of critiquing skills, the

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1 Dwight Allen and Kevin Ryan, Microteaching, Reading, Massachusetts: Addison-Wesley Publishing Co., Inc., 1969.

students attended an improved type of general methods course for 2 days a week for the first 4 weeks of the semester. In this course, which ran concurrently with the beginning of 503, students analyzed several videotapes of teachers made in classrooms in Philadelphia or its environs. The students used a verbal interaction system which was developed by the instructor of that course. This system was used in addition to other methods of critiquing. Its main purpose was to provide an objective framework within which to view teaching behaviors.

A Taxonomy of Teaching Tactics (Appendix 8) was developed later in the course in which potentially hundreds of combinations of tactics could be derived on the basis of a direct-indirect continuum of teacher behavior. The taxonomy was developed to illustrate the potentially large number of options available to a teacher who is planning a lesson. No effort was made to require the use of the taxonomy in the microteaching course.

Weekly group sessions, developed for the purpose of facilitating communication within the group, was another element in the course. The purposes of the group dynamics sessions were: "To increase ease and openness among group members. To focus on the importance of listening, feedback, and trust in establishing and maintaining effective interpersonal relations. To establish a climate where exploration of the above will facilitate group cohesiveness and allow the emergence of. . .forces potentially supportive of individual learning."

A three-hour block of time was used each week for a group session with a trainer. The group was divided in half and each group met with the trainer for approximately 1½ hours. Individual counselling sessions were available if a student requested them. The trainer was a doctoral student in psychological services who conducted the sessions as a practicum experience under the supervision of a faculty member. The general plan for these sessions was worked out by the trainer and the microteaching instructor.

These sessions were in confidence between the trainer and the students. The instructor had no access to the sessions, except by invitation, or to the content of the discussions except as the students chose to tell him.

Scheduling a course of this type could be a problem with part-time students. The hours between 9 and 12 noon, Monday through Friday, were blocked out for the course. The major portion of time was spent critiquing lessons, which occurred on Monday, Tuesday, and Thursday mornings with the videotaping of lessons taking place on Friday. Wednesday mornings were scheduled for the group dynamic sessions. Since the group consisted of 19 students, the group was divided into 2 subgroups to assure that each student would have time enough for a thorough feedback (critique) on his lesson. The subgroups would videotape and critique concurrently using 2 separate but adjoining rooms. A doctoral student was employed as a co-instructor for the course. The 2 instructors followed the course model although each was permanently assigned to a subgroup. The students in each group assumed respon-

sibility for videotaping the lessons in their group having been instructed in the use and care of the 2 sets of equipment.

Students were assigned the current week's teaching task on Monday. Thirteen global tasks, judged to be important in teaching, were developed for the course (Appendix 7). Six tasks were used as foci for the micro-lessons. The pace was set by the students. No effort was made to "cover" the 13 tasks because this would violate the integrity of the model. As our interaction analysis and other data indicate, nothing was apparently lost by this decision.

Examples of teaching tasks used include "Introduce a Concept in Your Field" (the task assigned for the baseline tape to record entry-level teaching ability), "Introduce Your Subject in an Interesting Manner," "Teach an Analytic Skill," and "Arouse a Desire to Learn 'X'." Whatever else might be said of these tasks, our students found them worth "working through." The ambiguity of the task, which demands a precision only the student can supply in the plan for his lesson, is ideally suited for the inductive method while providing sufficient focus for concrete lessons to be taught and critiqued. They add interest to an education course and provide an opportunity to be inventive which our experience and some research evidence indicates is probably one of the elemental characteristics of effective teachers.[2]

Each student was required to write a plan for each lesson and to

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[2] James Fey, "Classroom Teaching of Mathematics," Review of Educational Research, Volume 39, No. 4, 537-38, 1969.

distribute it to the group before the critique was begun. No special format for the plan was required. Planning for a lesson was the important thing, not the format. The instructor relied on the realistic nature of the task and its critique, effectively to convey the necessity for planning. As stated in more detail in a following section on the instructional model for the course, the students were to state objectives and make predictions of pupil responses to their lessons. These elements provided 2 criterion measures for the critique.

An effort, only partially successful, was made to state each objective in behavioral terms. This effort increased the precision of the objectives over time, but relatively few objectives would meet the criteria for behavioral objectives. One cannot escape the feeling that there is something artificial, in a real teaching situation, that apparently limits the use of behavioral objectives. The reader will note that none of the objectives for this course (which will be presented in a later section), meet the criteria for behavioral objectives in that the measurement criteria are not stated in the objective (although criteria were developed separately). The senior author and his students perhaps failed for the same reason--in the heat of battle one sometimes forgets the textbook niceties.

The first 4 lessons were taught to members of the student's subgroup. It was felt that peer-teaching would provide a gradual orientation to teaching and would permit the development of basic skills. These lessons were taught

at the level of their peers; that is, college level. Beginning in the fifth week, and continuing until the end of the semester, each subgroup taught 6 students recruited from Sayre Junior High School in Philadelphia. The Sayre students, 12 in number, were a cross-section of the students at that school. A content analysis of a videotaped interview with these micropupils, in which they evaluated the microlessons, will be presented in a subsequent section.

The general procedure followed in the critique of the microlesson is given below.

1. The microteacher distributes his plan, reads his objective(s) and the predictions of student response to his lesson. Discussion follows among the group on the merits of his plan.

2. A videotape of the lesson is played on the monitor.

3. Critical responses are made in this order: the microteacher, the group, and the instructor. As proficiency in critiquing increases over the semester, the instructor's contributions to the critique decrease markedly. (One of the course objectives is to develop in each student the ability objectively to critique a lesson.)

4. Positive and negative aspects of the lesson are discussed. Usually 1 element, which may have prevented the achievement of the objective, is discussed in depth. This element could be vague questions, questions which are inappropriate to the objective, missing student response cues, or the choice of inappropriate tactics. The critiques are cumulative and continuing

problems are discussed "across lessons."

5. Parts of the lesson may be replayed to clarify the data or to provide a stimulus for further analysis.

6. At the completion of the critique, each student, the instructor, and the microteacher complete a feedback from (Appendix 11). These forms are given to the microteacher to read and are filed in a folder in which all material relating to his lessons is kept. This folder, plus his video-tapes, provide a progressive record of his growth.

7. The critique must be constructive, and perceived by the student as being so, or much of its value would certainly be lost.

8. Grades are given at the end of the course and are based on the amount of improvement as evidenced by the behavior over successive lessons.

The anxiety level in microteaching is high, as discussed later in this chapter, and requires some gentle guidance by the instructor because the course could deteriorate into destructive competition, at one extreme, or a love feast, at the other. The instructor has to be careful, too, in still another way. This course artificially could be made into a "rough course" if the instructor wants to be so judged. The point is that it is intrinsically "rough" and no artificial ingredients, such as irrelevant letter grades for each lesson, need be added.

Within the general structure described in the model, the course is kept flexible. Students may, and do, change it. It is assumed that this degree of autonomy best capitalizes on individual learning patterns, demonstrates a

different style of learning and teaching, and encourages students to be more responsible for their own learning. The instructor solicits and frequently acts on the feedback received from students. In these and other ways we are trying to create a more positive climate, more free of artificial obstacles to learning.

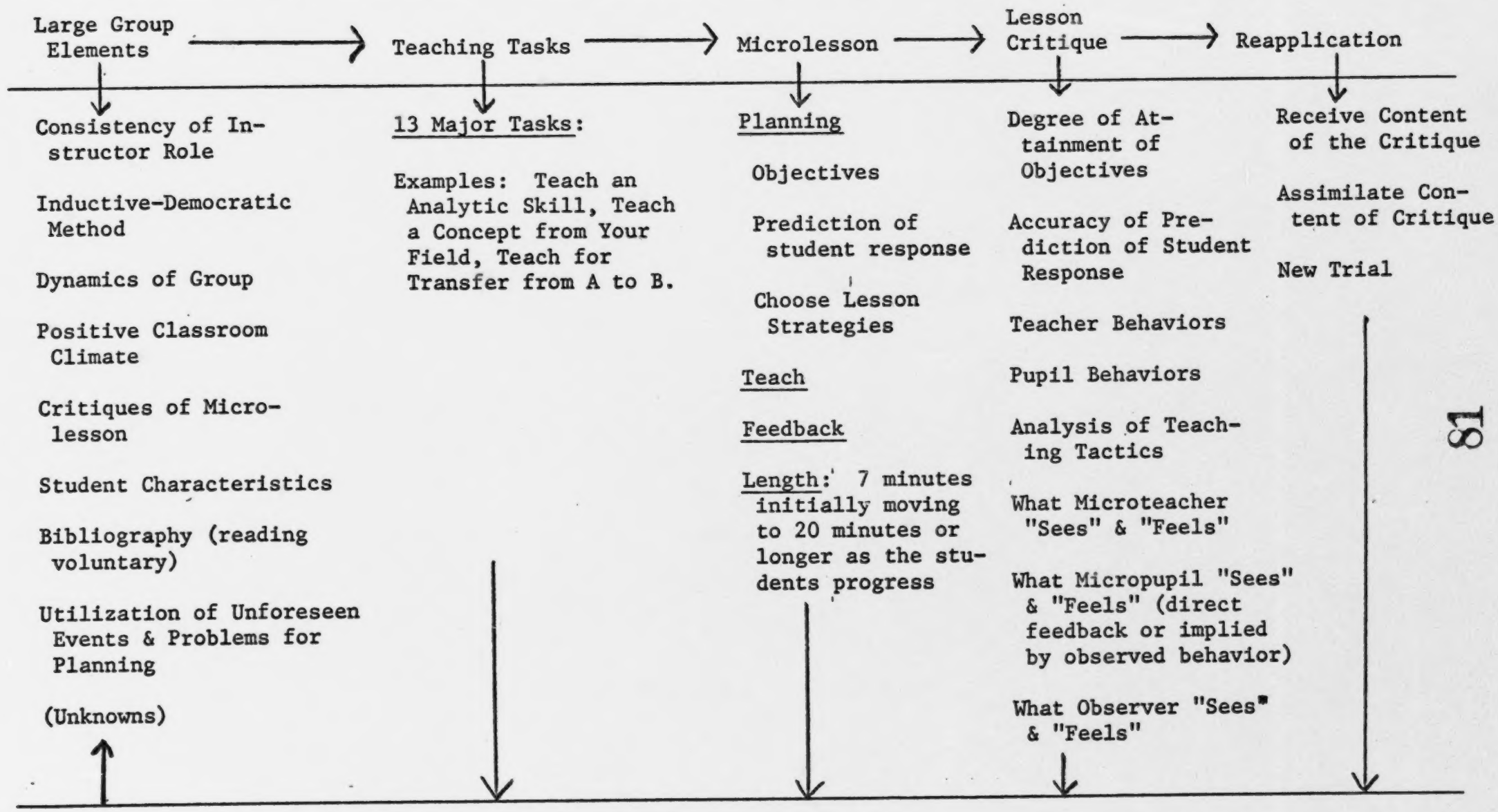
The Instructional Model

Chart 1 identifies the major elements of the instructional model and attempts to illustrate their simultaneity and interaction. The static nature of the chart inevitably misleads. Every element, for example, is not co-equal in duration or possible effect (one assumes). Who can say, for example, during a critique with a particular student, which elements of the model are producing the most effect: is it 2 of the large group components, the gestalt of the critique, or something else? A medium which could simultaneously show motion, overlap, sequence, and changes in the emphasis of the elements and their subparts would better convey the dynamic.

Most models are made by people who do not "live them." They are maps for thought, or for another's experience. It might be a healthy development in education if more clinicians would learn to organize their thinking through models, and if more theoreticians would try to "live with" at least some of the models they develop.

Chart 1

The Instructional Model Used in Microteaching:
Relationship of Primary Elements


Large Group Elements
Teaching Tasks
Microlesson
Lesson Critique
Reapplication
Consistency of Instructor Role
Inductive-Democratic Method
Dynamics of Group
Positive Classroom Climate
Critiques of Micro-lesson
Student Characteristics
Bibliography (reading voluntary)
Utilization of Unforeseen Events & Problems for Planning
(Unknowns)
13 Major Tasks:
Examples: Teach an Analytic Skill, Teach a Concept from Your Field, Teach for Transfer from A to B.
Planning
Objectives
Prediction of student response
Choose Lesson Strategies
Teach
Feedback
Length: 7 minutes initially moving to 20 minutes or longer as the students progress
Degree of Attainment of Objectives
Accuracy of Prediction of Student Response
Teacher Behaviors
Pupil Behaviors
Analysis of Teaching Tactics
What Microteacher "Sees" & "Feels"
What Micropupil "Sees" & "Feels" (direct feedback or implied by observed behavior)
What Observer "Sees" & "Feels"
Receive Content of the Critique
Assimilate Content of Critique
New Trial

The model deals with 2 types of experience: a positive classroom climate and microteaching. That the specifics of microteaching were embedded in a particular classroom climate, which both the students and the instructor tried to establish and maintain, are judged to be important. Our findings are rooted in the interaction of climate and means. Microteaching easily lends itself to an impersonal, mechanistic treatment. As microteaching is increasingly adopted for institutional and public relations reasons, as opposed to hard-headed instructional reasons, the probability of a mechanistic approach is high. That innovations are often adopted for reasons <u>other</u> than their merits is well known.[3]

Elements related to classroom climate include:

1. Use of an inductive-democratic method in which students define and invent solutions to problems and which provides for student participation and influence in decisions relating to substantive and procedural matters within the model's framework.

2. Use of regularly scheduled group sessions as described earlier.

3. Use of voluntary reading which utilizes the classroom climate to increase the desire to read.

4. Use of a behavioral approach (microteaching) to teaching using performance criteria intrinsic to the behavior practiced.

5. Use of problems which arise as opportunities to use (and test) the effectiveness of the inductive-democratic method--is it useful in solving

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[3] Matthew B. Miles, Ed., <u>Innovation in Education</u>, New York: Teachers College Press, 1964, p. 635.

real teaching problems?

6. Integrity in using the method by the instructor.

Elements related to microteaching include:

1. Use of specific teaching tasks of increasing complexity.

2. Use of a general plan for the microlesson.

3. Use of a general plan for the critique which is based on 2 key elements in the microlesson: objectives and predictions of the micropupils' responses to the lesson.

The use of certain elements, such as the democratic process, are not without their perils, but it was believed that sufficient confidence in the integrity of the instructor (consistency of role) and the processes (the inductive-democratic method) could be established (control) to eliminate most of the negative effects.

The basic idea in the model is that a deliberate effort would be made to create a positive and consistent climate for learning, using both form (method and process) and substance (demonstrably improving the ability to teach), in which developing the ability to teach would be approached holistically: the attitudes, skills, and concepts of teaching would be developed inductively through microteaching, the lessons of which would include objectives, predictions of student response, a choice of means to achieve the objectives, and extensive feedback to the microteacher.

Objectives

Objectives for Microteaching

A. "To demonstrate increasing ability to employ effective teaching strategies to achieve specific objectives in a particular lesson."

B. "To employ an increasing range of appropriate tactics to achieve a lesson objective (see the taxonomy of tactics)."

C. "To develop a positive attitude toward teaching and the development of individual criteria for one's improved teaching performance."

D. "To be able to critique another student's lesson in an objective manner using or adapting the criteria and process used by the instructor in class."

E. "To be able to receive and discuss criticism of one's teaching in a rational manner."

F. "To demonstrate significant improvement in one's teaching as seen by a) one's self and b) competent observors."

G. "To be able to work effectively in a class in which the initial course structure is determined by the teacher but in which a wide range of student initiative and responsibility for one's learning is encouraged."

H. "To voluntarily read books and articles dealing with teaching or other aspects of education."

I. "To develop more mature and personally derived values by which one chooses and evaluates educational experiences for one's self."

J. "To know from one's experience in this course that significant personal, professional, and liberal learning is possible through a student-centered, inductive process which places a premium on student initiative, responsibility, and problem definition with little or no a priori imposition by the teacher."

K. "To increase one's knowledge and understanding of the self."

The Content Analysis of the questionnaire data, on which the evaluations of Objectives A through K are based, is given in the next section.

Content Analysis of Questionnaire Data

To provide the reader with an overview of the questionnaire data for the course, a summary of the data is provided below. The students' responses were analyzed by content analysis. A copy of the questionnaire is given in Appendix 14.

Chart 2

Content Analysis of the 503 Questionnaire

Content Categories	f
1. Impact of the Inductive Method	
a. On learning the basic skills of teaching	
Facilitated	15
Unaffected	1
Inhibited	0
(Did not know what the basic skills were)	2
b. On attitudes toward teaching	
Change in positive direction	16
No change	2
Change in negative direction	0
c. On attitudes toward self and others in the class	
Change in positive direction	16
No change	1
Change in negative direction	0
No response	1
d. On attitudes toward your own learning	
Change in positive direction	17
No change	0
Change in negative direction	0
No response	1

Content Categories	f
e. Comments on the question:	
Inductive method increased awareness of self and others	5
Allowed for mutual respect	5
Problem solving procedure was often uncomfortable	5
Learning was continual	3
Every experience was meaningful	3
2. Motivational Status	
Initially high, decreased, then increased	7
Consistently high	8
High anxiety*, decreased later	1
Consistently high anxiety*	1
3. Value of 503 Relative to Liberal Arts and Other Education Courses	
503 had more intrinsic value than any other course taken	18
4. Strengths of Microteaching	
Feedback on teaching behavior (critiquing of microlessons)	13
Interpersonal relations fostered within the group	11
Students were integral part of planning	4
Gibboney's personal commitment	4
Wednesday sessions (group dynamics)	3
Lesson planning	4
5. Weaknesses of Microteaching	
Anxiety caused by unstructured nature of 503	6
Uncertainty concerning transference of micro-skills to larger teaching situation (503 became artificial, placing too much emphasis on attainment of objectives)	13

* The term "anxiety" was mentioned by 2 students rather than "motivation", the term used in the question.

Content Categories	f
Over emphasis on peer teaching which could be rectified by earlier arrival of Sayre students and by increasing the time per week with the Sayre students	4
Not enough time by Gibboney	3
Group dynamics sessions were unproductive	2
No contact with outside schools	2
Too much emphasis on teaching tasks	3
6. a. Extent of Outside Reading	
Extensive	6
Moderate	6
Limited	6
b. Desire to Read	
Increased	12
Unaffected	4
Decreased	0
No response	2
c. Reading Topics	
Urban Teaching	8
General Education	5
Social Studies	5
Communication	2
Philosophy	2
Child Development	1
Journals	1
Reading	1
Media	1
d. Was the Bibliography Helpful?	
Yes	6
No	9
No response	3

Content Categories	f
7. Was 503 an Effective Introduction to Teaching?	
Yes	18
No	0
Comments:	
It was as good as anything could have been but (we) are uncertain whether or not anything really prepares one for teaching	4
Students should be made aware of the constraints of microteaching	3
Critiquing increased our awareness of the complexities of teaching	3
503 was an ideal introduction to teaching	2
Makes student teacher more aware of need for full planning and more objectivity in analyzing teaching	2
8. Did the Process Alter Previous Ideas. . .on the Roles of Teacher and Student?	
Yes	15
Comments:	
Made me see the possibilities in an indirect teacher role	2
Helped me to be more flexible in my own teaching	1
No	3
Comments:	
Had prior commitment to indirect teaching style	1
9. Extent to which 503 Helped You to Become a More Effective Teacher?	
Extensive	9
Moderate	2
Limited	0
Cannot judge at this time; future will tell	7

Content Categories	f
Comments:	
Should differentiate between urban and nonurban	4
Now knows children can respond	1
Questions established methods	1
It is applicable to any teaching situation	1
10. Did the Wednesday Group Sessions Help Learning?	
Yes	13
No	5
Comments:	
Gained insight into group dynamics	10
Increased self-insight	6
Tension reduction	2
Too few sessions	1
Sessions forced issues	2
Sessions caused communication breakdown	1
Personal inhibitions interfered with lessons	1
11. Did the Critiquing in Reynold's Course Help You in Planning and Teaching?	
Yes	12
No	6
In Critiquing Microlessons?	
Yes	18
No	0
Comments:	
Provided structure	6
Clarified process	4
Gave common language	4
Gave a goal	1
Sustained high involvement	1
Made more critical of planning	1
Discussion too general	1

Content Categories	f
12. What are Instructor's Strengths and Weaknesses as a Teacher?	
Strengths:	
Ability to use the inductive method	6
Commitment	5
Sincerity and openness	6
Respect for the student	4
Courage to initiate program	3
Willingness to experiment	2
Ability to change	2
Objectivity	1
Weaknesses:	
Too busy	11
Aloofness (nonsupportive)	8
Inflexibility of judgment	5
Stereotyped some students	1
(Misinterpreted question - listed their own strengths and weaknesses as teachers)	3
13. Should "Tight Lesson Planning" be Continued Next Year?	
Yes	16
Comments:	
But relax structure earlier (have Sayre students earlier)	8
More emphasis on individual differences of teachers	2
Will be different for other groups	1
Team teaching is unrealistic	1
No	2
Comments:	
Concentrate on the needs of students	1
Totally restructure format	1

Content Categories	f
14. Additional Comments	
The latent black-white hostility in the group was overemphasized by the students	1
Emotional-social issues will cause differences of opinion and should not be viewed as social hostility	1
The racial balance in the group should be 50-50	1
Gibboney should have a black teaching assistant	1
The reality of the course should be increased	1
There were friendships between black and white	1
There have been accurate perceptions of individuals and no stereotyping	1

An Evaluation of Objectives A and B

Objectives A and B are given below.

A. "To demonstrate increasing ability to employ effective teaching strategies to achieve specific objectives in a particular lesson."

B. "To employ an increasing range of appropriate tactics to achieve a lesson objective (see the taxonomy of tactics)."

Since time and resources did not permit an evaluation of the attainment of each lesson objective taught by the microteachers, a literal evaluation of Objectives A and B is impossible. Within the context of a teacher education program, however, it is useful to know if the tactics used by the students increase in number and complexity over time; it is also useful to know the degree of Indirect and Direct teacher behaviors (defined later in this chapter) implied by the tactics chosen in the lesson planning phase in addition to the amount of Indirect and Direct teacher behavior revealed by an analysis of the students' teaching.

In this study our students' teaching behavior and attitudes will be analyzed in terms of the degree of their Indirectness or Directness with Indirectness being the quality sought. The attainment of an Indirect style of teaching was chosen for the following reasons:

1. As a value it is subjectively and empirically accepted as worthy because it places more responsibility and initiative on the student.

2. It is consistent with the stated rationale of the program and with

the instructional and group processes employed in this course in an effort to teach an Indirect style of teaching as an implicit part of the process used.

3. There is some research evidence that a more Indirect teaching style results in higher achievement and a greater positive attitude toward the subject taught.[4,5]

Tactic as used here includes such global behaviors as lecturing, role playing, or discussion (See Appendix 8) as well as the more specific "moves" a teacher makes to effect the tactic(s) chosen in an effort to achieve a lesson objective.

Strategy as used here includes any combination of tactics employed in an effort to achieve a lesson objective.

The data presented will be drawn from 3 sources:

1. Questionnaire responses
2. Videotapes of microlessons, and
3. Lesson plans.

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[4]Ned A. Flanders, "Some Relationships between Teacher Influence, Pupil Attitudes, and Achievement," mimeographed, Ann Arbor: University of Michigan, 1960, pp. 16 and 17. This article was based on a Cooperative Research Project funded by the USOE. Although Indirectness is not appropriate for all teaching situations and flexibility of teacher response is important, the data indicated that the more Indirect teachers were more flexible than the Direct teachers, and that their students in seventh and eighth grade mathematics and social studies classes achieved significantly higher than those in the more Direct classes. More constructive and independent attitudes toward the teacher and the subject were held by the students of the more Indirect teachers.

[5]James R. Campbell, Cognitive and Affective Process Development and Its Relation to a Teacher's Interaction Ratio, unpublished Ph.D. dissertation, New York University, 1968. Campbell concluded that in terms of affective and cognitive development among low achieving junior high school students in science that the Indirect method was superior for all areas tested.

Question 1A asked the students to describe the impact of the inductive method used by the instructor in learning the basic skills of teaching. Fifteen of the 18 students responded that the method facilitated the development of basic teaching skills. Some representative comments are given below.

1. "The inquiry method basically changed my definition of the teacher's role in the class. The straight emphasis on lecture, which I formally had accepted as a teaching model, evolved into a new model which emphasized the teacher's role as a moderator, a resource person in the classroom."

Another student responded that he now believed a wide range of skills to be mandatory for successful teaching.

2. "The inductive method employed in this course helped me to learn the basic skills of teaching. It showed me that there are many basic skills and that each of these is appropriate in particular situations. There seems to be no one way to teach and the inductive method used in 503 helped me to see that flexibility is probably the most important element in teaching."

3. "When I began to look back at those first 5 or 6 lessons, to look for some consistent reason for my basic dissatisfaction with myself, nothing seemed particularly evident until after the second lesson with the Sayre kids. And it was not until then that it occurred to me that I was looking at teaching very egotistically. To begin with, I saw that consistently throughout the previous lessons, the form was exactly alike in each. I was the center of attention, first to grab everyone's attention and interest, and then I attempted to

switch the center of focus to the kids. Perhaps this form is somewhat dictated by the traditional form of a classroom, even though the chairs are in a semi-circle, the chairs all face 1 basic spot. And we (I) had set up the traditional classroom form in front of the camera, which itself implied that form--to hear everyone. So, every lesson must have a dynamite beginning in order to keep the attention of the class. With the experience of the Sayre kids, I began to see that if I were teaching regularly this method would be, not only extremely difficult to maintain, but also still ineffective for every student in a class. Consequently, I realized that it was the form which needed changing. In other words, I had come to a conclusion as a result of these experiences, inductively, and I wanted to test that conclusion. First, I hypothesized that if it were possible to initially impose nothing of myself on the students. Rather than working on my skills as a multi-media lecturer, I wanted to develop skills as an observer and interpreter, and guide if necessary; a guide who starts the questions and activity from the kids. This, of course, is a learning-center model, but my exposure to its existence alone did not bring me to understand its viability in the classroom. I had come to that level by examining logically the weaknesses of my own method."

A random sampling of the taped microlessons were analyzed by an objective observer who used the Taxonomy of Teaching Tactics to determine whether or not the students had learned to use an increasing range of tactics. As a further check, the lesson plans of these students were analyzed to determine if there

was any growth in the complexity of the strategies used. In all cases it was determined that both the number of tactics and the complexity of strategies increased over time. In tapes 1 and 3, the microteachers were teaching their peers; in tapes baseline, 5, 6, and 7, they were teaching urban junior high school students. Lessons taught to peers were to be at the college level.

In the baseline tapes, made to record pre-instruction teaching ability, for example, the only 2 recurring tactics were lecturing combined with convergent question and answer behaviors. All of the questions asked during these tapes were teacher derived with student answers receiving perfunctory positive or negative reinforcement depending on whether the answer received was the one which that teacher had been "looking for."

In all of the baseline lessons, the teacher was either sitting or standing in front of the classroom.

An examination of the lesson plans handed in by each teacher for the baseline lesson revealed that no teacher listed any tactics or strategies to be employed in the lesson. The plans, as would be expected, were disorganized and vague.

Analysis of Tape 3, made October 26, 1969, indicates marked progress in both number of tactics and complexity of strategies. Of the 5 students randomly sampled on this tape, the range in the number of tactics used was from 5 to 7, with a mean of 5.6. All 5 teachers used an open discussion with the

students, 4 used audio-visual materials, all used extensive divergent questioning, and 2 used a role-playing tactic. The typical interaction pattern thus became multi-directional, with discussion varying from teacher-to-student, student-to-teacher, and student-to-student.

From an examination of the increased number of tactics used over the baseline tape one may infer that there was an increase in the complexity of strategies employed. Examination of lesson plans submitted for the tape substantiates this conclusion. Strategies did in fact become more complex as the following lesson plans indicate.

Lesson Plan of Student A--Tape 3

Objective: To have students begin to think about the evocative and descriptive effects that the use of words can have, and that poetry can be a vehicle to accomplish this, hoping that this realization will excite them enough to want to pursue the matter further.

Behavioral objective: To create, by the use of open-ended questioning and presentation of stimuli, a discussion among the students and myself, leading to the discovery of that which is stated above.

Strategy: A combination of the following tactics:

Tactic 1: To hand each member of the class a sheet of paper on which the following is written: "There is a man; he is old; he is poor; he is hungry; he is standing in the street; he has a whistle."

Tactic 2: To ask one member of the class, using the facts he has before him and adding whatever elaborations he might care to make, to create a word picture, or scene, for the rest of the class, that will make the old man seem real, and alive.

Tactic 3: To ask the rest of the class to close their eyes, make their minds as blank as possible, and to try and picture the scene which the one class member is describing to them.

Tactic 4: To ask the class, still with its eyes closed, the following question(s).

1. Does anyone want to add anything to the picture which -------- has just described, to make it more vivid or alive? If no responses, then I will ask:

2. Did you receive a sharp, complete picture? If no response, then:

3. Was it alive for you. . .did it make you feel anything?

If use of either of the last 2 questions is necessary, I will synthesize the class reaction before proceeding to the next step.

These last 2 tactics should have diagnostic value in that they will enable me to get an idea of how the class perceives the descriptive power of words. Furthermore, these tactics should establish within each student an inner-dialogue in response to the facts presented him and the task at hand.

Tactic 5: Transitional statement: A poet named F. S. Flint drew a word picture using the same elements with which we have been working. I'm going to read it to you now, and ask you to close your eyes, and try to picture the scene as I read it.

Tactic 6: Read the poem.

Tactic 7: Did the picture you received this time differ at all from what you received last time? If answer is yes, ask:

1. How is it different?

2. Why is it different. . .what makes this treatment of the same elements so much more effective?

If answer is no, then ask:

1. After which description did you feel you knew more about the man? and then Why?

2. After which description did you feel more compassion for the man? and then Why?

This last tactic should lead naturally into a discussion of words and their use, which is the objective of the lesson.

Partial Lesson Plan for Student B-Tape 3

Objective: Define the problems which arise when logic is applied to historical interpretation.

Strategy: Using syllogisms, discuss the difference between using fact and opinion in historical reasoning.

Tactics: Narrow and broad questions, neutral response, having students react to each other in order to stimulate discussion.

Questions on Syllogism #1: (Note: The syllogisms were not stated in the plan.)

1. Is it true? Why, what makes it true?

2. Are both premises valid?

3. Is there any room for opinion in this syllogism?

Questions on Syllogism #2:

4. Is it true? Why, why not? What makes it true? untrue?

5. Are both premises valid?

6. Could the first assumption be true in the same sense that first assumption of #1 is true? What is the difference?

6 A. What do you think about X's answer?

7. Could first assumption of #2 be a valid one in some people's minds?

8. What is the difference between 1 and 2?

8 A. What lesson does this teach to historians? . . .

Predictions: Premises in #1 are true, because they consist of provable and even factual data. This will be seen quite readily. Two will be shown invalid (not quite as readily) because it represents an opinion which is not proven and therefore for our purpose is historically illogical. Students will be able to abstract the inaccuracy of using erroneous logic in history.

Feedback: Through answers to questions and through the examples of syllogisms they give. . . .

This tape represents the first time that students began to write-out the questions that they would ask during their lessons, and to develop alternate series of succeeding questions dependent on the possible answers received to the first series. This is a practice that continued among an increased number of students throughout the remainder of the course.

Part of Student B's plan was deleted to save space and consisted of divergent questions on historical interpretation which stated a major premise.

Tape 5, made on November 1, 1969, represented the student's first exposure to junior high school pupils. For this lesson the task was to teach a diagnostic lesson. In this tape, while the mean number of tactics used remained at 5.6 as was true of Tape 3, the range increased to between 3 and 8. Only 1 teacher from among the 5 randomly sampled used as few as 3 tactics, and that particular teacher was attempting to teach a lesson in mathematics. Of the remaining 4 teachers, 2 used 5 tactics, 1 used 7, and one 8. Significant also is the fact that the microteachers in this lesson began to change their physical positions in relation to the class as revealed by the Non-verbal Category Analysis (See Appendix 15). Thus, 1 teacher sat with the students at a table, actively involving himself in performance of the task at hand; 3 teachers circulated freely about the class; 1 remained seated in the front of the room, although the students' chairs were shifted about to form a semi-circle; and 1 teacher used 2 subgroups for purposes of discussion. In this lesson all but 1 of the teachers used some form of audio-visual device.

Since the complexity of strategies is a function of the number of tactics

used, it may be assumed that, as in the past lesson, the strategies in this lesson increased in complexity. Some students went so far as to depict in their lesson plans the interactive patterns that they wished to develop, as the lesson plan which follows indicates.

Partial Lesson Plan for Student C-Tape 5

Objective: Determine the depth of interest and knowledge that the class has about current trends in American society, and have the class come up with suggestions about topics they would like to study.

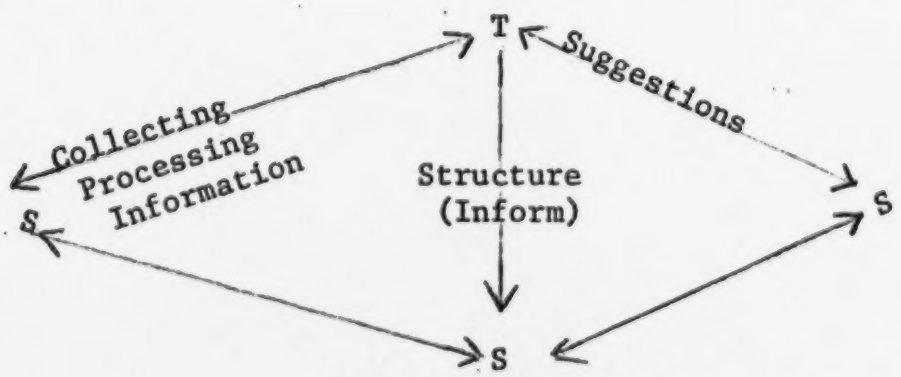
Strategy: Play a record about "National Brotherhood Week", discuss it ask for other topics and list them on the board.

Tactics: Broad questions, reinforcing response.

Predictions: The class will see the hypocrisy in the song. They will probably come up with such broad topics as:

Viet Nam, Civil Rights--Riots. . .

Diagram



1. What does this song seem to say about National Brotherhood Week?

2. Remember he said:

Malcolm X was killed on National Brotherhood Week.
It is as American as apple pie to hate.
Shake the hand of someone you hate.

Does this seem to suggest a negative attitude toward Brotherhood, as it exists in the U.S.?

3. What do you think about Brotherhood in the U.S.?

Does it exist, or do we just talk about it?
Are our claims about Brotherhood and Democracy true?

4. In the record, he says that he is "Grateful that National Brotherhood Week doesn't last all year." Would you want it to last all year? . . .

The diagrams of teacher-student interaction were first presented in the six-week sessions on critiquing which paralled the first 6 weeks of microteaching. Similar diagrams were sometimes used by the instructor to "boil down" a lesson in an effort to reduce confusing detail and to facilitate the lesson critique.

Although the data are not presented, there was a general increase in the precision of objectives with some students frequently including criteria in the objective which would indicate whether or not the objective had been achieved.

The trend with respect to diversity of tactics continued in Tape 6 which was the final tape assessed. The average number of tactics used by the students was 7.3; the range was between 6 and 8. The complexity of strategies also increased as evidenced by the increasing number of tactics used.

Conclusion

The quantifiable data with respect to Objectives A and B relating to an

expected increase in the number of tactics used in the microlessons, with a consequent increase in the complexities of the strategies used, are summarized below.

Chart 3

Increase in the Number of Teaching Tactics Used by Students in Microteaching (N=18)

Tape	Month Recorded	N of Tapes	Mean Tactics Used	Range of Tactics	Increase in Complexity of Strategies
Baseline	Summer, 1969	12*	2	1-6	Baseline
3	October 21, 1969	5*	5.6	5-7	Increased
5	November 1, 1969	5*	5.6	3-8	Same
6	November 7, 1969	5*	7.3	6-8	Increased

* Random sample

The qualitative data, illustrative lesson plans and the student comments on the questionnaire, support the above data with respect to an expected increase in the number of tactics used and the complexities of teaching strategies employed. Since 15 of the 18 students perceived the inductive-democratic method used in the course as a positive influence in learning teaching skills, the increase in the number of tactics over the semester may reasonably be attributed to this "process learning" as well as to the more direct work which occurred in microteaching.

Conclusion

Objectives A and B are judged to have been met with respect to the increase in the tactics and the complexity of the teaching strategies employed.

In the next section, Objectives A and B will be evaluated on the basis of the amount of indirect teacher behavior evidenced in the microlessons as revealed by interaction analysis and 2 other measures.

Analysis of the Microteaching Tapes

The microteaching videotapes were analyzed by 3 observers using 3 different methods: the Flanders' system, the type of teaching tactics used, and a non-verbal system. For the purpose of analysis by the 3 methods, a group of tapes filmed at the same time during the year were combined, much as if they represented a "single person" for that taping period. Thus, the baseline tapes of 12 students, each of which was 7 minutes long, were collapsed and treated as a single tape 84 minutes long. The subsequent tapes, representing 4 time periods, were similarly collapsed over 5 randomly selected students for each time period and treated as a single tape.

The interaction analysis was done by hand and later transcribed to digitex sheets for optical scanning and punching of data cards. A computer program was used to print both a frequency and a percentage matrix for each group of tapes analyzed.

In the Flanders system the verbal events were sequentially recorded with a single number representing the category that described the verbal behavior occurring at each 3 second interval. From this chain of numbers, ordered temporally, a 10 x 10 matrix can be formed wherein the row entry is the first number of a sequential pair and the column entry is the second number of the pair. The procedure is repeated whereby the second number becomes the first number of a sequential pair. Thus, the 5 events recorded temporally, 4-8-3-5-5, would be entered in a matrix by having a tally placed in Cell 4-8 (row 4, column 8) of the 10 x 10 matrix. The next tally is entered in Cell 8-3 (row 8, column 3), because the 8, although it was the second event of the initial

sequential pair, becomes the first event of the next sequential pair. In order, the remaining matrix entries would be Cell 3-5 and Cell 5-5. A convention adopted by Flanders was to begin and end each time period with a 10.

A 10 x 10 matrix based on the tallies recorded during 20 minutes of observation would have about 400 tallies. This frequency matrix of 100 cells with column totals and row totals, can be viewed in terms of steady state cells and transition cells. The steady state cells are those that describe continuous behavior in a sequential pair (1-1, 2-2, 3-3, etc.). Thus Cell 5-5 contains the tallies of continuous lecture behavior. The transition cells are those cells that describe changes of behavior in sequential pairs; for instance, Cell 4-5 of a matrix contains the tallies of behavior that shifted from questioning to lecturing.

Three useful ways of dealing with Flanders matrices were employed after the frequency matrices were transformed to percentage matrices by a computer. The first way was to use column totals to represent the percentage of class time spent in a given verbal behavior as categorized by Flanders system. A second way was to let each cell represent the percentage of time that the two specific verbal events occurred in sequence. A third way to view the cells in a given column as proportions of the column total; for example, 10 percent of the total behavior may be in column 4; if Cell 4-4 contained 2 percent of the total class behavior, we could conclude that 2/10 or 20 percent of the time that behavior 4 occurred, 4 was followed by behavior 4.

The data can best be analyzed by a number of criteria established by Flanders through his I/D and S/T ratios. The I/D ratio represents the total number of events in categories 1-4 divided by the total events in categories 5-7. This measure of indirectness would be 1.00 if the amount of indirect teacher influence equalled the amount of direct influence. An I/D ratio below .40 will be the cut-off point for Direct behaviors; and I/D ratio above .70 will be the cut-off point for Indirect behaviors.[6]

The S/T ratio represents the amount of student talk, categories 8 and 9, divided by the amount of teacher talk, categories 1-7. This ratio consists of 2 percentages: the percent of student talk and the percent of teacher talk. Although no absolute norms have been established for these ratios, the amount of direct influence in a typical class studied by Flanders is invariably more than the indirect; the teacher talk is almost always more than student talk. Thus, ratios of 1.00 are extremely rare in the classrooms, studied by Flanders. (Observation of actual classrooms reveals that the teacher usually dominates; i.e., talks more than the students.) Amidon and Flanders have established norms,

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[6] James R. Campbell and Cyrus W. Barnes, "Interaction Analysis - A Breakthrough?", Phi Delta Kappan, June, 1969, 587-590. These cut-off points are based on research at New York University and other centers and reflect the obtained ratios for indirect and direct teacher behaviors.

percentages in given cells and categories, which characterize indirect teachers and direct teachers.[7] These criteria will be used to assess the matricies of the combined tapes for each time period analyzed (see p.103).[8] The combined tapes for each time period may be assessed for each of the criteria listed as to whether it is indirect (I), direct (D), or neither (NS), not significant; NS is used when the data fall between the cut-offs for I and D. It must be noted that the reported matrices are <u>percentage</u> matrices in which "rounding" may produce zero percentages when, in fact, the frequency actually was non-zero. Because of the "rounding" error, the computation for the attainment of criteria was based on <u>frequency</u> not percentage. For each matrix that follows the appropriate cells which satisfy certain criteria have been marked with a triangle when criteria for indirectness were met, and marked with a square when the criteria for directness were met.

The non-verbal category system (p. 104) was used to provide another way of characterizing classroom behavior. The categories were similarly "collapsed" over the 5 microteachers for each time period. The frequencies of the categories were transcribed and converted to a percentage of the total class time (with the

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[7] Edmund J. Amidon and Ned A. Flanders, <u>The Role of the Teacher in the Classroom: A Manual for Understanding and Improving Teacher Classroom Behavior</u>, Rev. Ed., Minneapolis: Association for Productive Teaching, 1967, 102 pp.

[8] Criteria C and D are based on Amidon and Flanders norms; a decision was made by the authors that less than 25 percent lecture would be indirect because of the desirability of student initiated learning, and to consider 30 percent lecture direct. Amidon and Flanders declared 80 percent of column 5 in 5-5 to be direct; the authors decided that 50 percent of column 5 in 5-5 would be indirect.

exception of the non-verbal cues which were left in raw frequencies since the percent of time would be less meaningful). A simple summary of the percent of class time taken by each non-verbal behavior could thus be reported.

A third method of analyzing the taped teaching behaviors of the students involved analyzing the tactics used and characterizing them as indirect or direct as indicated in the Taxonomy of Teaching Tactics (Appendix 8).

By using 3 independent measures to ascertain the indirectness or directness of a collapsed tape for 5 randomly selected students at a given point in time, we can see if there is consistency among the 3 measures in our analysis. Consistency is not validity, but more confidence is warranted in our analysis if 3 independent measures yeild congruent results in an area as complex as the objective study of teacher behavior.

Copies of the criteria for determining indirect-direct teacher behaviors, the Flanders' interaction analysis system, and the non-verbal instrument are given below.

(An interesting question is implicit in our beginning efforts to analyze teacher-pupil behavior from 3 dimensions: verbal, non-verbal, and tactics. What is the minimum number of critical dimensions in teacher-pupil behavior; what are the qualitative characteristics of these dimensions; and to what extent is a congruent interaction required of these dimensions to <u>insure</u> that a specific criterion measure of affective and cognitive learning can be achieved 90 percent of the time?)

(Concommitant research and evaluation efforts, rigorously linked, could

yield prescriptive conclusions of the type required to develop a theory of instruction useful to the teacher. Our modest effort to evaluate the micro-teaching model employs a multi-dimensional approach in an effort to reach prescriptive conclusions about instruction within a field setting.)

The criteria for determining indirectness and directness on the tapes are given below.

Criteria for Determining Indirect and Direct Teacher Behavior for the Microteaching Tapes

A Column 3 total
  Direct -- 2% or less
  Indirect--9% or more

B Column 4 total
  Direct -- 8% or less
  Indirect-- 11% or more

C Column 5 total
  Direct -- 30% or more
  Indirect-- 25% or less

D Cell 5-5 as a percentage of column 5
  Direct -- 80% or more
  Indirect-- 50% or less

E Column 6 total
  Direct -- 8% or more
  Indirect-- 4% or less

F Column 7 total
  Direct -- 5% or more
  Indirect-- 1% or less

G Cell 4-8 as a percentage of column 8
  Direct -- 50% or more
  Indirect-- 30% or less

H Cell 9-9 relative to other cells in column 9
  Direct -- another cell larger than 9-9
  Indirect-- 9-9 is largest cell in column

CATEGORIES FOR FLANDERS INTERACTION ANALYSIS

TEACHER TALK	INDIRECT INFLUENCE	1.* ACCEPTS FEELING: accepts and clarifies the feeling of the students in a non-threatening manner. Feelings may be positive or negative. Predicting or recalling feelings are included. 2.* PRAISES OR ENCOURAGES: praises or encourages student action or behavior. Jokes that release tension, not at the expense of another individual, nodding head or saying, "um hm?" or "go on" are included. 3.* ACCEPTS OR USES IDEAS OF STUDENT: clarifying, building, or developing ideas suggested by a student. As a teacher brings more of his own ideas into play, shift to category five. 4.* ASKS QUESTIONS: asking a question about content or procedure with the intent that a student answer.
	DIRECT INFLUENCE	5.* LECTURING: giving facts or opinions about content or procedure; expressing his own ideas, asking theotorical questions. 6.* GIVING DIRECTIONS: directions, commands or orders to which a student is expected to comply. 7.* CRITICIZING OR JUSTIFYING AUTHORITY: statements intended to change student behavior from non-acceptable to acceptable pattern; bawling someone out; stating why the teacher is doing what he is doing; extreme self reference.
STUDENT TALK		8.* STUDENT TALK-RESPONSE: a student makes a predictable response to teacher. Teacher initiates the contact or solicits student statement and sets limits to what the student says. 9.* STUDENT TALK-INITIATION: talk by students which they initiate. Unpredictable statements in response to teacher. Shift from 8 to 9 as student introduces own ideas.
		10.* SILENCE OR CONFUSION: pauses, short periods of silence and periods of confusion in which communication cannot be understood by the observer.

*There is NO scale implied by these numbers. Each number is classificatory, it designates a particular kind of communication event. To write these numbers down during observation is to enumerate, not to judge a position on a scale.

(Developed by Ned A. Flanders, University of Michigan)

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Categories for Analyzing Non-verbal Classroom Behavior

(This instrument was developed by Richard A. Gibboney and Michael G. Langsdorf, January, 1970. It will be revised as necessary on the basis of its use in microteaching and evaluation.)

Classroom Organization

1. Total group
2. Small group
3. Individual student

Classroom Movement

1. Teachers or other adults circulate and engage in verbal or non-verbal interaction with students.
2. Pupil(s) move and interact with other pupils or adults without permission of the teacher when the teacher sees this movement, but does not criticize the movement. The movement is related to the work being done.
3. Pupil(s) move about the room without permission of the teacher but do not interact with anyone in the room.
4. Pupils move about the room without permission of the teacher, but interact in a manner which is disruptive from the work being done.

Pupil Self-Direction

1. Pupil determines the pace of his activities.
2. Pupils self-select instructional materials, topics, problems, or content through either "free choice" or from alternatives posed by the teacher.

Media are Used by Pupils and/or Teacher

(Media: any tangible instructional material used in the lesson.)

Non-Verbal Communication Cues

a. Positive Cues: smiling, nodding of head, encouraging motion of hands.

b. Negative Cues: Looking "past" pupil or group, any use of the body which conveys the message "don't do that" or "wrong pupil behavior."

Note: To reduce the degree of observer interpretation, subcategories of specific pupil teacher behaviors will be added to the general categories as experience dictates.

(The reason for the use of the non-verbal instrument in the study should be clear: If teacher/pupil behavior is judged to be Indirect or Direct on the basis of verbal interaction analysis, does the analysis of other pertinent dimensions of behavior, such as non-verbal behavior, lead to the same or to a different conclusion? The analysis of teaching tactics used here is a similar effort to test, in a preliminary way, the same question.)

The collapsed matrices for the microteaching tapes are analyzed in this section. Since the micropupil group varied in this course, the source of the "pupil group" is repeated below for each tape analyzed:

1. Baseline Tape - Junior High School Students
2. Tapes 1 and 3 - Peer Group
3. Tapes 5, 6, (7)* - Sayre Junior High School Students

Other tapes made were Tape 2, October 1, 1969, and Tape 4, October 27, 1969, which were too close in time to Tapes 1 and 5 to be used; Tapes 8 and 9, the final tapes of the course, could not be used because audio distortion so garbled the speech that they were impossible to analyze.

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* Tape 7 was analyzed by methods other than a matrix as explained later in this chapter.

Flanders' Percent Matrix for Baseline Tape
Collapsed for 12 students

	1	2	3	4	5	6	7	8	9	10
1										
2										
3			1	1	2				1	
4				1				3	3	1
5				3	52				1	
6										
7										
8			1	1	1			1		
9		1	3	1	1				15	
10									1	
Column total		1	5	8	57	△	△	5	21	2

△ = Indirect □ = Direct

I/D = .24 S/T = .37
Teacher Talk = 71% Student Talk = 26%

Criteria for Direct-Indirect Behavior

A	B	C	D	E	F	G	H
NS	D	D	D	I	I	D	I

Non Verbal Interaction Categories

100% Total Organization
1% Media
4 Positive Non-Verbal Cues

Teaching Tactics

Direct

1. Lecture
2. Question-Answer (Accept-Reject)
3. Teacher Derived Questions

The 3 measures, interaction analysis, teaching tactics, and non-verbal categories, indicate that the Baseline Tape, see the matrix on the preceding page, was directive. The Baseline was taken in the Summer of 1969. The teaching task for this tape was: "Introduce a Concept from Your Field." The teachers talked 71 percent of the time, lecturing for 57 percent of the lesson. Both ratios were relatively low, which is to be expected with such a high 5-5 cell. The I/D ratio was below the .40 level set for directive behavior. The list of tactics supports the conclusions drawn from the matrix; only 3 tactics were used, all of which fell in the direct column of the taxonomy. The non-verbal measure reflects a total class organization which is indicative of direct behavior. Direct behavior is also evidenced by relatively few questions (Column 4), extensive lecture (Cell 5-5), and rapid question and answer (Cell 4-8) which is also indicated by Tactic 2.

Some indirect behavior is evident: criteria E, F, and H show, respectively, that few directions were given; that less than 1 percent of time was spent in criticism or justifying authority; and that the microteachers permitted the students to elaborate on their own ideas for 15 percent of the time (Cell 9-9). The absence of negative non-verbal cues and the presence of 4 positive non-verbal cues are also evidence of indirect behavior.

Flanders' Percent Matrix for Tape 1
Collapsed for 5 students

	1	2	3	4	5	6	7	8	9	10
1										
2			1							
3			2	1	2				1	
4				1					3	
5				2	60				1	
6										
7										
8										
9		1	3	1	1				18	
10										
Column total		1	5	5	63				23	1

△ = Indirect □ = Direct

I/D = .18 S/T = .31
Teacher Talk = 75% Student Talk = 23%

Criteria for Direct-Indirect Behavior

A	B	C	D	E	F	G	H
NS	D	D	D	I	I	D	I

Non Verbal Interaction Categories

100% Total Organization
6.6% Media
1 Positive Non-Verbal Cue

Teaching Tactics

Direct

1. Lecture
2. Audio-Visual Aids
3. Question-Answer (Accept-Reject)
4. Teacher Derived Questions

Indirect

1. Question-Answer (Accept-Neutral)

Tape 1, taken September 16, 1969, after instruction had begun for several weeks, is also direct. The task was: "Introduce Your Subject in an Interesting Manner." Both the S/T and I/D ratios are low; the I/D ratio is directive. The high percentage, 60 percent, found in Cell 5-5, indicates sustained lecture. Criteria B and C indicate directness with respect to the relatively small percentage of time spent in questioning and the high Column 5 total which, again, reflects lecturing. The microteachers talked 75 percent of the time. The total class organization and the high proportion of direct tactics is consistent with the data in the matrix.

Some indirect behavior is evident; however, these behaviors were not sufficient to change the direct pattern of the matrix. One indirect tactic was used. The 9-9 cell, highest in Column 9, met Criteria H for indirectness. The absence of criticism meets Criteria F for indirectness.

Flanders' Percent Matrix for Tape 3
Collapsed for 5 students

	1	2	3	4	5	6	7	8	9	10
1										
2										
3			1	1	1				1	
4								△	6	
5				1	27	1				
6						3			1	
7										
8										
9		1	3	4	1				44	
10						1				1
Column total		1	4	6	29	6	△	1	52	2

△ = Indirect □ = Direct

I/D = .32 S/T = 1.18
Teacher Talk =46% Student Talk = 53%

Criteria for Direct-Indirect Behavior

A	B	C	D	E	F	G	H
NS	D	NS	D	NS	I	I	I

Non Verbal Interaction Categories

100% Total Organization
13% Pupils Self-Pace
10% Pupils Self-Select Materials
10% Pupils Self-Select Topics
50% Media
11 Non-Verbal Cues

Teaching Tactics

Direct
1. Lecture
2. Teacher Derived Questions
3. Question-Answer (Accept-Reject)

Indirect
1. Role Playing
2. Student Derived Questions
3. Open Discussion
4. Indirect Problem Solution

Tape 3, taped on October 21, 1969, was based on "Teaching Problem Definition Skills." This tape is characterized by a direct I/D ratio and a relatively high S/T ratio (1.18) which reflects the 53 percent student talk. The large percentage in Cell 9-9, student initiated talk meets Criterion H for indirectness. Two criteria exemplified directness--infrequent questioning (Column 4) and the relatively frequent use of extended lecture (27 percent). The extended lecture is mitigated by the moderate use of lecture, Criterion C, 29 percent, which was not sufficient to satisfy the criterion in either direction although it approached the 30 percent cut-off for directness. Of significance is the fact that the criterion for indirectness for G, 4-8 Cell, was achieved, complementing achievement of the indirect criterion for H, student initiated, divergent talk. The infrequency of rapid question-answer and the frequency of extended student initiated talk, is supported by the list of indirect tactics accompanying this lesson. The tactics probably account for most of the marked increase in the S/T ratio over the previous 2 tapes analyzed.

The non-verbal categories indicate a basically direct pattern with 100 percent total group organization and the use of media for 50 percent of the time. Some indirectness is evident in the small percentage of time used for pupils to self-select materials and to pace themselves; this marks the first appearance of this type of behaviors.

Tape 3 is a transition tape--the old and the "new" behaviors are almost

in balance, but the new behaviors cannot yet be sustained. (In 2 months of intensive effort, we have "unlearned" to near the zero point.)

Flanders' Percent Matrix for Tape 5
Collapsed for 5 students

	1	2	3	4	5	6	7	8	9	10
1										
2									1	
3			1	1	1				2	
4								5	9	1
5				1	5				1	
6				1		1			1	
7										
8				4				1	1	
9		2	4	8	1	1			44	
10										
Column total		2	5	16	7	3		6	59	2

△ = Indirect □ = Direct

I/D =2.30S/T = 1.97
Teacher Talk =33% Student Talk = 65%

Criteria for Direct-Indirect Behavior

A	B	C	D	E	F	G	H
NS	I	I	NS	I	I	D	I

Non Verbal Interaction Categories
100% Total Organization
1% Teacher Circulating
14% Pupils Self-Pace
40% Media

Teaching Tactics

Direct
1. Lecture
2. Question-Answer (Accept-Reject)

Indirect
1. Open Discussion
2. Student Derived Questions
3. Simulation
4. Student Derived Problems
5. Teacher Involvement in Class
6. Question-Answer (Neutral)

The character of Tape 5, taped November 14, 1969, based on teaching a diagnostic lesson, is indirect as evidenced by the very high I/D and S/T ratios and the large percentage of student talk, 65 percent. Only 1 criterion, G, reflected direct behavior, rapid question-answer, while 5 criteria were indirect. The Column 5 total, Criterion C, showed indirectness with 7 percent, well under the cut-off of 25 percent. Extended lecture, Criterion D, was neither direct nor indirect. The tactics also reflect the presence of indirect teacher behavior in this lesson. Tactics 2, 4, and 6 are conducive to frequent and sustained student initiated talk which is reflected in Cell 9-9. Pupil self-pacing has increased slightly over Tape 3.

The I/D ratio of 2.30 is extremely high, well over the cut-off of .70 for indirect behavior. The S/T ratio of 1.97 reveals that there was almost twice as much student talk as teacher talk.

Flanders' Percent Matrix for Tape 6
Collapsed for 5 students

	1	2	3	4	5	6	7	8	9	10
1										
2									1	
3			2	1	1					
4								2	7	
5				1	12	2			1	
6				1	1	14			1	
7										
8				1		1				
9		2	3	5		1			35	
10										
Column total	1	2	6	10	16	18		2	45	1

△ = Indirect □ = Direct

I/D = .56 S/T = .89
Teacher Talk = 53% Student Talk = 47%

Criteria for Direct-Indirect Behavior

A	B	C	D	E	F	G	H
NS	NS	I	NS	D	I	D	I

Non Verbal Interaction Categories

68% Total Organization
32% Small Groups
12% Teacher Circulates
22% Pupils Self-Pace
22% Media

Teaching Tactics

Direct
1. Audio-Aid
2. Teacher Derived Questions
3. Lecture

Indirect
1. Group Derived Problem
2. Simulation
3. Open Discussion
4. Question-Answer (Neutral)
5. Role Playing
6. Inductive Problem Solution

Tape 6, November 7, 1969,* is indirect, but the amount of indirect behavior is less than in Tape 5. The I/D ratio is indirect; the percent of talk is about equally divided between students and teachers. Criteria A, B, and D are not significant. Criteria C, F, and H are indirect with respect to lecture, criticism, and student initiated talk. Though lecturing was indirect, it was moderately extended when it did occur as indicated by Cell 5-5 with 12 percent. Criteria G, 4-8 Cell, is direct. Cell 9-9, extended student initiated response, is related to the indirect tactics used, especially 1, 3, and 6. The number and scope of the indirect tactics involved in the tape are further reflected in the non-verbal measure. The fact that one-third of the time the tape was characterized by small groups facilitated using the indirect tactics of group derived problems, open discussion, and indirect problem solution. The small group structure encouraged teacher circulation and pupil self-pacing. Most of the time, 68 percent, was in total group organization. In the judgment of the observers the lesson was characterized by discipline problems which are reflected in the amount of commands in Column 6, 18 percent, which is well beyond the direct cut-off of 8 percent in Criterion F. Criticism of the students, Column 7, was not used by the microteachers on this tape.

(This lesson, which proved to be very important to the development of the course, is discussed in a later section of this chapter.)

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* The tasks developed by the instructor were not used from this tape to the end of the course; because the students wanted to try to plan and teach a series of lessons within a unit. This focus, then, became the task for succeeding lessons.

Four summary tables for each of the 5 microteaching tapes which were analyzed, are given below to facilitate inter-tape comparisons.

Table 1

Summary of Collapsed Percent Microteaching Matrices Over Time--Flanders System*

	Flanders Categories									
Tape	1	2	3	4	5	6	7	8	9	10
Baseline		1	5	8	57			5	21	2
1		1	5	5	63				23	1
3		1	4	6	29	6		1	52	2
5		2	5	16	7	3		6	59	2
6	1	2	6	10	16	18		2	45	1

*Numbers under categories are percents.

Table 2

Summary of Different Indices of "Talk" for Collapsed Microteaching Matrices

	Flanders Ratios			
Tape	I/D	S/T	Teacher Talk	Student Talk
Baseline	.24	.37	71%	26%
1	.18	.31	75%	31%
3	.32	1.18	46%	53%
5	2.30	1.97	33%	65%
6	.56	.89	53%	47%

Table 3

Summary of Collapsed Microteaching Matrices
on Indirect-Direct Criteria

	Criteria							
Tape	A	B	C	D	E	F	G	H
Baseline	NS	D	D	D	I	I	D	I
1	NS	D	D	D	I	I	D	I
3	NS	D	NS	D	NS	I	I	I
5	NS	I	I	NS	I	I	D	I
6	NS	NS	I	NS	D	I	D	I

I=Indirect, D=Direct, NS=Not Significant

Table 4

Summary of Non-Verbal Behavior for Collapsed
Microteaching Matrices in Percent

	Group Organization								Self-Direction			Non-Verbal Cue	
	T.Grp	S.Grp	Ind.	Movement							Use of		
Tape	1	2	3	1	2	3	4		1	2	Media	Pos.	Neg.
Baseline	100										1	4	0
1	100										6.6	1	0
3	100								13	10	50	11	0
5	100			1					14		40	0	0
6	68	32		12					22		22	0	0

Discussion

Table 1 reflects the percentage occurrence of column totals for the 5 tapes taken from the Flanders matrices. Categories 1, 2, 3, and 10 indicate no appreciable change over time, with Category 8 yielding an uncertain pattern. The increase in frequency of Category 4 in the last 2 tapes illustrates the increased use of questioning behaviors by the microteachers. Furthermore, the increase in Category 6 for the sixth tape denotes a rise in the number of commands used, which is to be expected given some disciplinary problems which occurred in this tape. This aspect of Tape 6 is further confirmed by the fact that the frequency of lecture (Column 5) dropped markedly over time, with an increase in Tape 6 from Tape 5. The frequency of student-initiated response (Column 9) showed a marked increase over time with a slight decrease in Tape 6.

As Table 2 indicates, the I/D ratio grew steadily over time, with the sharpest increase occurring in Tape 5. The drop of this ratio in Tape 6, although large relative to Tape 5, did not regress to the level attained in Tape 3 and met the criteria for indirectness. Sicne the inductive process relies extensively on student participation, and since evidence of this participation is reflected in the S/T ratio, the rapid increase indicated by the table is noteworthy. This ratio shows extremely large increases in Tapes 3 and 5; the drop in Tape 6 to .89 still indicates a high level of pupil involvement.

From Table 1 it can be seen that the amount of silence or confusion, Column 10, stayed constant throughout the tapes. Therefore, the percentages

of student talk and teacher talk, as seen in Table 2, varied inversely. From over 70 percent of teacher talk on the 2 initial tapes, the percentage drops to 33 percent by Tape 5 but increases to 53 percent on Tape 6. The student talk increases during the tapes from 26 percent initially to 65 percent on Tape 5 with a drop to 47 percent on Tape 6. Thus, on Tape 6, the teacher talk and student talk are close to 50 percent.

Table 3 represents the achievement of direct and indirect criteria over the 5 tapes. Criterion A relates to the frequency of teacher acceptance of student ideas. The percentage of the Column 3 total, which is the basis for establishing this criterion, remained relatively constant and met neither the direct nor the indirect cut-off points.

Table 3 shows that the amount of questioning, Criterion B, was direct through the first 3 tapes. On Tape 5 the behavior was indirect, while on Tape 6, the behavior fell between the 2 cut-off points.

Criteria C and D, covering the amount of lecturing and the amount of extended lecturing respectively, display a trend away from directness and toward indirectness over time. The most salient fact is that tapes 5 and 6 achieve indirectness according to criterion C and fall between the cut-offs for criterion D. Thus lecturing became less extensive and less extended over time.

Criterion E, concerning frequency of the use of commands (Column Total 6), was predominantly indirect and became direct only during the emergence of

disciplinary problems in Tape 6. Criticism (Criterion F) was virtually non-existent throughout the tapes, achieving indirectness on all tapes.

Criterion G, the relative predominance of the 4-8 Cell (rapid question and answer), was direct in all tapes except number 3 where it was indirect.

Extended student intiated response (Cell 9-9) is the basis for criterion H. This criterion was indirect throughout the tapes.

Table 4 reflects the changes over time in classroom behavior as measured by the non-verbal categorization system. It can be seen that class organization remained a total group until Tape 6 when one-third of the time was spent in small groups. Generally, little teacher or pupil motion occurred until the sixth tape. Self-direction, or pupils pacing themselves and/or selecting their own materials, became more frequent after Tape 3. The use of media fluctuated throughout the tapes, increasing, decreasing slightly, and increasing again. The category entitled Non-Verbal Cues is not nearly as meaningful here as it is when recorded during a "live" lesson. Its frequency for taped lesson is limited to the behaviors the camera chances to record.

An Additional Comment

A discussion of Tape 7, taped on November 13, 1969, although it was not analyzed with the other tapes because the Flanders' system was incapable of analyzing it, is appropriate because it was the last tape of the course which could be analyzed (audio distortion prevented analysis of Tapes 8 and 9).

As has been previously indicated, Tape 6 involved several disciplinary problems because the pupils desired still less formal lessons, and who, presumably, acted on this feeling by being less cooperative in Tape 6. At least this was the result of the diagnosis of the tape by the microteachers who met as a total group in an effort to define the source of this problem and to test possible solutions. Both groups decided to effect some basic changes for the next tape while permitting 2 or 3 microteachers who wanted to continue within the existing structure (10 minute lessons taught by 1 microteacher) to do so. They began by pooling their microteaching time to assure themselves of a much longer time period in which to teach, thus the lesson on Tape 7 is about 70 minutes long. The microteachers reasoned that a change in the instructional environment, with a consequent change in teacher role, would induce a change in the pupils' behaviors.

The microteachers decided to play a facilitator-observer role within an altered physical environment. Before the arrival of the Sayre microstudents, most of the furniture was removed from the room and the environment was "salted" with many kinds of instructional materials. These materials ranged from record

players, tape recorders, and typewriters to modular building blocks, overhead and slide projectors, and large sheets of paper and other art materials. The microteachers, about 5 in this lesson, would mix with the students, but would respond only when a student initiated a contact.

The purpose of the lesson was diagnostic: What type of response would the microstudents make to this "free" environment? What clues could the microteachers pick up, as facilitator-observers, which would be indicative of their pupils' interests, maturity of response in a "free" environment, and readiness for pupil-initiated learning, all of which could provide "natural" starting points for more pupil-centered lessons?

Illustrative behaviors in this lesson included: 2 students using the tape recorder to interview others (including teachers) on the Vietnam War and a controversial teacher at another school, 1 boy wrote a poem at the typewriter, other students listened to music, looked at slides on a large city, talked with each other and with the teachers, and used the art materials. No "discipline problems" occurred.

No more is claimed for this lesson than that it was successful in providing clues for future lessons and that it confirmed the earlier judgment that a change in "lesson style" did alter the pupil behaviors sufficiently to preclude the "discipline problems" of the previous lesson.

Unfortunately, this lesson came near the end of the semester and the audio distortion on the 2 succeeding tapes prevented their analysis.

The lesson could not be analyzed by the Flanders' system which is dependent upon discrete two-way verbal interchanges. The tactics used were indirect: student definition of response to a constructed environment. The non-verbal analysis indicated indirect behavior: small group and individual group organization; teacher movement and pupil interaction with adults and other pupils; and pupil self-pacing and selection of materials.

Conclusion

The weight of evidence presented in the preceding section, which consisted of an analysis of microteacher behavior on 3 measures from randomly selected students over approximately 4 months, suggests that increasing indirectness in teaching behavior was achieved over time and that the microteaching model was satisfactorily productive.

Objective C will be evaluated in the following section.

An Evaluation of Objective C

Objective C reads: "To develop a positive attitude toward teaching and the development of individual criteria for one's improved teaching performance."

Data which relate most directly to the first part of the Objective, "To develop a positive attitude toward teaching. . ." are found in 1b, of the Content Analysis. Sixteen of the 18 students indicated that their attitude toward teaching had changed in a positive direction; 2 reported no change; none reported a negative change. Illustrative student comments on their attitudes toward teaching are given below.

1. "I now have a much broader concept of what teaching is. . .but my attitudes about teaching, teaching skills. . .were all something I had to learn to be responsible for when there was no one professor to blame them on."

"The inductive method helped me to form a more open attitude toward teaching. I don't think I've taken one method as a cure-all and closed myself off to all other methods."

2. "It has put me in awe of very good teachers and has made me sympathetic with some of the bad."

3. "It helped me realize that teaching involves process over content; that a teacher must be open-minded above all else. I have seen that teaching cannot be taught, it must be felt, experienced. It not only must be inductive, but also student centered. . .learning must have a direct relationship to the

total environment."

4. "The inductive approach improved my attitude toward teaching. I began to visualize a framework upon which successful teaching was based. A means to evaluate my own teaching, as well as that of others, was revealed. When planning both my lessons, and the environment in which I wished to teach them, I have some concrete objective upon which to base my plans."

5. "First of all the exposure to the inductive method of teaching shattered my original concept of teaching. Induction had always been associated in my mind with scientists and philosophers, and because I was neither, it had never occurred to me to apply it to my own learning (although I now question whether I ever really 'learned' at all in school and teaching. So now I feel that excitement lies not only in the 'payoff' of learning something, but in the very process itself. I guess my goal in teaching would be to provide my students with the opportunity to involve themselves in that process thereby gaining some understanding of the process itself so that they might use it in any situation they encounter. Having experienced the inductive method as a student I also have an appreciation of the frustration involved. Accepting the assumption that a certain amount of frustration is conducive to learning, it however appears to me that the teacher should not only play the roles of a resource person and a learner, but also the alleviator of levels of frustration which impede learning."

6. "I do remember. . .that my attitude toward teaching in general was markedly different in the beginning of the course than it is now. In September I retained what I suppose is the popular conception; that anyone with a Bachelor's

Degree could teach. Having tried and failed numerous times in an ideal setting, before achieving even a modicum of success, my ideas have undergone a painful transformation, which can be summarized by my saying that I now have a tremendous respect for teaching."

"This is not to say that I was wrong in the beginning of the term. Adhering to the model which I then had of teaching, I was quite correct. . .anyone could have done it. It is rather, my model of teaching which has undergone such radical alteration, and given this fact, a concomittant shift in attitude is to be expected."

Students 3 and 6 mentioned specific criteria for teaching performance which is mentioned in Objective C: process is important, students should be involved in the process used by the teacher, and the teacher should be a resource person and a learner in addition to keeping student frustration at a "proper level" if the inductive method is used.

Item 4 of the content analysis indicates that 13 students regarded feedback as a valuable part of microteaching. Although the relationship is not direct, this response may indicate that a "feedback source" would be important to them as a means of improving their teaching performance. (This judgment is partially confirmed in that all of the students requested group teaching placements in April, 1970, for the second year of the program. In August of 1970, 12 students were placed in groups of 2 to 4 in 4 Philadelphia schools. The main reason given for this request was "mutual help" in what they know will be a difficult year.)

Item 7 of the content analysis indicates that 100 percent of the 18 students replying believed that 503 was an effective introduction to teaching. In the comments, 2 students mentioned the awareness of "full planning" and objectivity in analyzing teaching and 3 mentioned that critiquing made them aware of the "complexities of teaching." Given the general structure for this course, and the unanimously favorable response to the experience, it is probable that many of the elements of microteaching (objectives, predictions, diverse tactics, and feedback) will find their way into their criteria for improved teaching performance. This judgment is partially supported by Item 13 which indicates that 16 students felt that "tight lesson planning" should be continued in the course next year.

Conclusion

Although the data indicate that ". . .a positive attitude toward teaching. . ." was achieved, the data relating to ". . .criteria for one's improved teaching performance" are less clear and are of insufficient magnitude to conclude that this part of the Objective was achieved. Objective C, therefore, was not attained.

An Evaluation of Objective D

Objective D states: "To be able to critique another student's lesson in an objective manner using or adapting the criteria and process used by the instructor in class." Three criteria may be used: the students' assessment of the value of their 4 weeks in Mr. William Reynold's course in which they focussed on critiquing tapes from our library, the instructor's assessment of the students, and the changes made by the students in redesigning the "evaluation sheets" for microteaching.

The students were unanimous in their assertion that this experience was very valuable in learning to critique objectively using certain criteria (a cognitive-interaction analysis system developed by the instructor and others). Illustrative comments are given below.

1. "I did. . .learn a great deal about critiquing and came away with a firm structure which provided a foundation for future critiquing."

2. "Knowledge of the 'interaction analysis' techniques served as a basis for my early critiquing efforts. It gave us a handle to grasp--a definite set of patterns for which to look. Later in the semester, while the details of interaction analysis were forgotten, the essential ideas behind them were assimilated into my general frame of reference."

3. "Reynold's class proved valuable for future microlesson critiquing. It pointed to specific things that you could look for in every lesson that you critiqued. The cognitive-interaction analysis process gave me a compact

and clear way to analyze any given lesson. It also gave me confidence in my ability to evaluate myself and others more objectively in the lessons which we were to critique later. It also served as a handy beginning point from which we refined our own critiquing sheet for our lessons."

The students' progress in critiquing was evaluated by their individually critiquing a tape of an experienced teacher which was shown on the monitor. The students were free to use any approach they wished. The instructor reports that, although the critiques by 3 students were inadequate, the remainder of the group performed at a ". . .good to excellent level."

Indirect, but solid evidence of the ability to critique in an objective manner, is that without this skill, the microteaching course would have become too competitive and the students would not have perceived it as helpful (Item 7 of the Content Analysis). Thirteen students cited the critiquing phase of the course as its primary strength (Item 4 of the Content Analysis).

An inspection of the microlesson feedback sheets reveals that, over the semester, the number and quality of the criteria used increased, the comments were less perfunctory and disjointed, and the criteria used were more specific with respect to the statement of objectives and the appropriateness of the tactics chosen in an effort to achieve particular objectives.

During the semester the students revised the microlesson "evaluation sheets" originally prepared by the instructor. Illustrative modifications included consideration of the implications of titling these sheets "feedback" as opposed to "evaluation" (as the instructor had titled his draft); elimination

of the 1 to 5 rating scale for all components; and the elimination of some categories in the original instrument and the addition of new categories such as "Teacher Responses to Student Behaviors/Reactions." The very productive suggestion that each student complete a feedback sheet and give it to the microteacher came from the students' re-evaluation of the instructor's original instrument.

(One hesitates to include observational data of this kind because student participation has often been used as a student tranquilizer and as a subtle means of student control, in addition to being used as an "exhibit piece" to publicize psuedo-progressive teaching methods. The possibility of the students doing this, with the instructor as a participant, and with the further condition that possible changes should offer a reasonable chance for improving the instrument as decided by the group, provides a concrete referent for such abstractions as the "inductive-democratic method" and "consistency of instructor role" mentioned earlier in the discussion of the instructional model which was used in this course.)

Conclusion

On the basis of the data presented Objective D is judged to have been met.

An Evaluation of Objective E

Objective E states: "To be able to receive and discuss criticism of one's teaching in a rational manner."

In this course, one must not learn only how to give (criticism), but to receive (criticism). The primary data related to Objective E are that 13 students, responding to an "open response question", cited feedback on teaching behavior as a strength of the course (Item 4, Content Analysis). Illustrative comments follow.

1. "Microteaching gave a chance to learn to accept criticism without becoming too defensive or hurt."

2. "If critiqued in groups, it tends to make a teacher more receptive to outside criticism."

3. "It allows the student to observe his strengths and weaknesses rather than simply being told about them. People tend to disregard the criticism of others as merely differences in perception while microteaching allows one to see himself and judge from that which he himself sees."

4. "The basic strength in microteaching is that it enables a teacher to see himself as he affects students everyday. It seems to me that all teachers should be undergoing this type of criticism continually. Most people do not know how to accept constructive criticism. They invariably take it personally. I think that we learned that microteaching does not criticize us as people but as teachers."

5. "I hope to retain the ability to accept criticism and will make every attempt to get this from my peers as well as the students."

Conclusion

On the basis of the data, Objective E is judged to have been met.

An Evaluation of Objective F

Objective F states: "To demonstrate significant improvement in one's teaching as seen by a) one's self and b) competent observors."

Only data relating to one's self-perception of growth in teaching ability will be analyzed here because extensive observational data on teaching behaviors will be presented in the next section of this chapter. A further constraint is imposed on data relating to Part a of the Objective: Since perception of growth in teaching is a recurring objective of the program, it will be treated in more depth in later sections of this report when Education 504, the Spring practicum experience, is evaluated. Data presented here will be drawn only from the Fall Semester's microteaching course.

The primary data relating to Part a of the Objective are found in Items 9 and 1 of the Content Analysis. Item 9 indicates that 11 students believed that 503 was of extensive (9) or moderate (2) assistance in becoming a more effective teacher. Seven students (very intelligently, perhaps) replied that they preferred not to venture an opinion until they had actual teaching experience.

Item 1 indicates that 15 students believed that the use of the inductive method facilitated their learning of basic teaching skills.

A few illustrative student comments are given below.

1. ". . .What this course has done is to give me a new perspective on teaching, learning, and education in general. I do not know to what extent these new beliefs can adapt themselves to the institutional constraints of an

urban school, but this is not the crucial issue. What is essential is a firm conviction that I now have some idea as to what education must include if it is to be viable and successful. That, I believe, was for me the primary focus of this course and not 'urban' education per se."

2. "From working with the Sayre students, I believe that I saw how beneficial student-teacher relationships can be when students feel that their teachers have a stake and interest not only in them but in their community. I have come to believe, through our work, that this method will give us and our students a tool for success in the setting of urban schools."

3. "I think that this course will help me to become a better teacher because I learned from this course that secondary school students can be motivated to learn if the classes are made relevant to the students, and if the lessons are made interesting the students will make an attempt to learn."

4. "If I am more aware of the effects of my actions on a class, I must be better equipped to teach in any school. I think that microteaching did that and thus will help me to become a better teacher."

5. "Hopefully, after the microteaching experience, I am better able to analyze and critique my own teaching, better able to look at myself rather than the students when a lesson falls apart. At least from my experience with the Sayre students I know that if the environment is right an 8th grade boy can respond to a typewriter by sitting down and typing a poem, that 8th grade girls can respond to a tape recorder by conducting interviews."

6. "I think this understanding and belief that as a teacher I have a lot

to learn from my students will help me to be more responsive to the students in the urban schools. I will want them and encourage them to express their opinions, ideas, knowledge, and I will respect these. Whether this attitude will make me a more effective teacher in urban schools I must wait to see."

Although qualitative data, such as forced response comments, may not deal as directly with the Objective as we would like, the texture of the students' comments quoted above do reveal their perceptions of teaching which indicate growth has occurred. Although we have no pre-program data on attitudes toward teaching, it is highly unlikely that the students entered the program with the ideas expressed above already formed.

Conclusion

Part a of Objective F is judged to have been met.

An Evaluation of Objectives G through K

The reader will recall that we were evaluating methodically (perhaps laboriously) the 11 objectives for the microteaching course which included our recent extensive concern with behavioral data. We return now to the remaining objectives which will be treated in a more summary form.

The first 6 objectives for the microteaching course have been evaluated in some detail because they were judged to be of primary importance if excellent beginning teachers were to be trained. Objectives G through K, with the possible exception of K, were judged to be less critical and will be treated more briefly.

For ease of reference the complete list of objectives is repeated on page 139A.

Objective G relates to being able to work effectively with the instructional model used in the microteaching course. Illustrative items from the Content Analysis which support achievement of this Objective are Items 1a, b, c, and d, all of which received a favorable response from at least 80 percent of the students. These data refer to the effect of the course in learning the basic skills of teaching, attitudes toward teaching, attitudes toward the self and others, and attitudes toward one's own learning.

Other items, such as 8, could be mentioned, but will be omitted in these summary statements.

Illustrative comments from the students, which provide a qualitative texture

to the data, will be cited below.

1. "Frustration--that was the major effect of the inductive approach used in microteaching. It meant 3 months of no answers and little direction. We were all put into the same "pressure-packed" situation and expected to work our way out. Hence, we were all scrambling together--each looking to the other for an answer, for support. . .I never realized how caught up I had been in the teacher image--I was the one responsible for my lessons, for my students. It was my ballgame and I was the center of attention in the class. In the beginning, when we were teaching ourselves, I had not been aware of this egoism because my teaching tactics had worked. I had become an expert at pulling off gimmicks, at knowing how to psych out the students and their responses to my tactics. . . . I continued to do this same thing when we got the Sayre Junior High students, but it did not work. They did not respond to me or to my teaching tactics. Despair. What was the matter? Maybe I could not teach at all. I felt threatened--the real test had come and I had failed. This was the turning point in microteaching for me. It was the point of self-examination which lead to a new approach to teaching. This breakthrough was possible, however, because others were going through the same experience. I was not alone in my failure. Merely knowing this prevented me from becoming so personally threatened and defensive about my teaching so that I could ask 'Why?', 'What went wrong?' rather than say 'it's the kids.' The result of asking these questions was the realization

Objectives for Microteaching

A. "To demonstrate increasing ability to employ effective teaching strategies to achieve specific objectives in a particular lesson."

B. "To employ an increasing range of appropriate tactics to achieve a lesson objective (see the taxonomy of tactics)."

C. "To develop a positive attitude toward teaching and the development of individual criteria for one's improved teaching performance."

D. "To be able to critique another student's lesson in an objective manner using or adapting the criteria and process used by the instructor in class."

E. "To be able to receive and discuss criticism of one's teaching in a rational manner."

F. "To demonstrate significant improvement in one's teaching as seen by a) one's self and b) competent observers."

G. "To be able to work effectively in a class in which the initial course structure is determined by the teacher but in which a wide range of student initiative and responsibility for one's learning is encouraged."

H. "To voluntarily read books and articles dealing with teaching or other aspects of education."

I. "To develop more mature and personally derived values by which one chooses and evaluates educational experiences for one's self."

J. "To know from one's experience in this course that significant personal, professional, and liberal learning is possible through a student-centered, inductive process which places a premium on student initiative, responsibility, and problem definition with little or no a priori imposition by the teacher."

K. "To increase one's knowledge and understanding of the self."

that, even though I considered myself to have liberal, progressive views on education (I'd read all the right books such as 36 Children and How Children Fail), my actions did not coincide with my ideas. Although I spoke of student-centered learning, I structured how and what they were to learn so that I became the center of attention. I believed in the team-teaching concept, but my ego had prevented me from working with others."

2. "The impact of the inductive approach was two-fold. Because everything was (and had to be) drawn out of my own experiences, learning the skills was often frustrating. The frustration that arose in the implementation of the skills helped make the skills more meaningful and natural. I learned about the teaching skills in much the same way I learned about fire--I got burned the first time and then learned to cope with it."

"I find that since the very beginning of microteaching (the first week or 10 days), once I had gotten over the realization that no one would tell me what I needed to know, that I have become capable of defining and satisfying my own needs. The development of this attitude constituted perhaps my most significant learning experience of the entire semester and, I think of my life."

"Achieving such a realization is crucial to the success to an inductive learning situation. . .and I believe that it is a breakthrough which no one can force and which can't be externally imposed."

3. "The inductive approach resulted in a combination of opposites that we all felt: frustration-success, absurdity-definition, problem-solution, etc.

Depending on the whole range of human variables, I shared these problems with the others, and inflicted them on others. They did the same to me. The key here is the environment in which each of us felt a personal stake in our own and each others lives."

4. "In some almost unintelligible and certainly intangible way the inductive process gave me the opportunity for a scrupulous self-appraisal. Since the criteria for success and failure within this course were my own, the appraisal could be an honest one. This is significant, for in many respects the opportunity offered me the chance to relate things honestly to myself, and in turn to relate fairly openly to others. If this statement sounds banal, it is nevertheless true."

5. "An inductive approach seems to allow you a greater possibility for understanding yourself and the people you work with. There is no set model of teaching which each of us had to live up to. Each individual, however, with the help and guidance of others creates what he believes to be a workable teaching model for himself. This method seems to create a greater awareness of what you and others are doing, how you and they feel, how you and they react to given situations--both in and out of stress."

6. "I have clarified my own educational ideas, and have become more confident with them. I have developed a self-image of myself as a teacher, and this was done through trial and error, only possible in a loosely structured course."

"This is the only course I have ever taken anywhere in which I developed

my own criteria of success and failure, set my own goals, and was entirely responsible for their accomplishment."

"In other courses there was 1 primary objective: to get as high a grade as possible. Anything else was incidental. All through microteaching I never thought about the grades. It had become the incidental factor. I absorbed from readings and experiences what I thought would be necessary to make me a better teacher. Working along with others made us better learners and this rarely occurred in conventional courses. The inductive method made me feel more responsible to the other people in the class. If at times nothing was being accomplished it was my fault as well as others that this was so. . .they were problems which we encountered and wanted to find answers to.

"In this course I could work without worrying about my grade. Oddly enough, I worked harder and tried to do the best I knew how because I wanted to. Frustration sometimes developed because there was no real division between class time and my own time."

7. "I learned the impact that an individual has on a group. There was an unstated, but expected responsibility of each individual to the others in the group, and this sometimes meant that individuals had to make personal sacrifices . . .I think this method is not only the best, but actually the only effective way of learning the basic skills of teaching because teaching skills are numerous, variable, and indefinable in absolute terms."

8. "I have learned not to value extrinsic reward as much and also to live admidst great confusion! . .Because of the constant flux of the course, I have

learned to cope with the unstructured and the changing situation."

9. "The inductive method employed gave me a new awareness of the excitement of the learning process. (How can you 'turn on' kids if you aren't turned on?)"

Objective H relates to voluntarily reading books and articles on education. Twelve of the students reported extensive or moderate reading; 6 reported limited reading. Self-report data indicate that the range of books read was from 4 to 36. The mean number of books read was 11. The average number of articles read was 20. Observation of books seen in class, in addition to the positive classroom climate which existed, would tend to support the self-report data although we cannot be objectively certain that data are valid.

One-third of the students described their article reading as extensive; one-third as moderate; and one-third as limited. Two-thirds of the students stated that the course had increased their desire to read.

Since there were fewer comments to questions relating to outside reading only 1 comment will be reported.

1. "My outside reading for 503 averaged to around a book a week. In the beginning of the semester most of my reading centered around educational theory and methods of teaching social studies. My reading soon broadened, however, to include any book I felt would relate to my teaching--from McCluhan to Langston Hughes. What is important about my reading is not the number of books read, but the time I spent thinking about what I was reading and the discussions I had about some of the books. Many of the books I read, I read because I heard others in the group talking about them."

Conclusion

Objective H is judged to have been met.

Objective I, to develop mature values by which one evaluates his own educational experiences, is supported by Item 1d in the Content Analysis. Item 8 indicates that 503 altered their previous ideas on teacher-student roles; Item 3 indicates that 100 percent of the students rated 503 higher in intrinsic value than all of their previous liberal arts or education courses (about 7 students had previously taken education courses). The consistently high percentage of students who replied affirmatively to the experience (Items 3 and 8) would make it reasonable to conclude that 503 did exert a positive influence which probably will be reflected in future choices of learning experiences.

Since many of the extended student comments previously cited relate to Objective I, such as those quoted for Objective G, no additional citations will be made.

Objective J, to know that significant learning can occur in a student-centered, supportive climate, is overwhelmingly supported by the data. The 100 percent affirmative response to the effectiveness of the course as an introduction to teaching is evidence of its success as are the data in Item 1 of the Content Analysis which relate to such affective areas as attitudes toward teaching and toward one's own learning.

Illustrative comments are given below.

1. "If the process referred to here (Note: a question in the instrument) is the non-directive teacher role, then I certainly was affected by it as a model. Again, the form of that process communicated more than lectures about the process. As evidenced by the later group tapes, the process by which the course was directed became the model for several of the methods employed by the students. It was a matter of our questions about what we were doing that kept the interest level so high, and that was the conclusion I came to in relation to my own role as a teacher. That being someone who is there for resource purposes and who builds the environment for learning from the materials the students provide as individuals."

2. "Microteaching made my ideas of student-teacher relations in the classroom become almost the inverse of what they had been before. Through my previous teacher training experience I had come to believe that it was the teacher's role to be the active agent--the student the passive one. This was very evident in my baseline tape in which I lectured throughout my entire lesson demanding interaction from my students and yet never giving them a

chance to ask questions or become involved in a discussion. I saw myself imposing my values on the students which in the future probably would have stifled any innovative ideas on their part if they were contrary to mine. I set a mental and physical barrier between me and my students which probably never could have been overcome if I continued to teach in the same way."

3. "In the course of our work I discovered the values of a student-centered approach and, I hope, that my ideas toward teaching were greatly changed. I tried to work actively to overcome what I found to be past deficiencies. I still believe that the teacher must maintain an active role--but this role must be channeled to the students to make them actively involved in their learning process and totally involved in their work. It is not the teacher's job to impose values on his students, but to let his students explore those areas within a given subject field that are important and relevant for them. The teacher should work actively to destroy all barriers between him and his students--in this way there will always be open lines of communication. If a teacher can't trust his students and give them the autonomy they demand in the learning process, then these important lines of communication can be broken down. The teacher must also actively work not to fall back into patterns of the past or be satisfied with past successes, but always be open to the changing needs and wants of all his students. My change in attitude for roles of students and teachers in the past 4 months has completely reversed my 16 years of past school experience. The challenge upcoming will be for the constant fight for the maintenance of these attitudes."

4. "I now understand the difference between teaching which allows for student discussion and student-teacher interaction but in which the teacher is still the center of attention, and teaching in which the teacher acts as a facilitator to learning and removes herself from the center of class action. I realized this difference from my own microteaching experiences. In my baseline tape I used a visual aid and was equipped with a series of questions. Even with the visual aids and questions, I did all the talking (even answered my own questions). In later tapes I managed to do less talking and have more student discussion. My visual aids and teaching tactics were more sophisticated. I was still the center of attention, however. I structured not only the material but the way in which the students were to react to it so that the only way they could deal with the material was through me. In the last lessons my role was limited to gathering the material and structuring a different classroom environment. The tapes of these lessons showed not me, but the students reacting to the material."

Of the 3 students responding negatively to the question, 1 stated that the reason his perceptions had not been altered was because he had begun the course with a strong commitment to the inductive method.

5. "I have felt for a long time that an inductive method was a good way to teach and that possibly one of the only ways that people learn is through experience."

Neither of the other 2 students answering negatively included any comments with their answers.

Objective K, to increase one's knowledge of the self, cannot be fully evaluated on the basis of the data on hand for 503. Observation and informal talks with students leads one to believe that this did occur for most of the students, but only 6 students mentioned self-insight when commenting on the group dynamics sessions. More extensive data on this objective will be presented in the next chapter.

Since the group sessions are functionally related to this objective, student comments on this experience are presented below.

1. "I don't believe that the Wednesday group sessions served their avowed purpose. Instead of creating open avenues of communication between members of the group, I think it forced certain issues to the breaking point and caused a breakdown of group communication. I think the sessions had a forced nature--every Wednesday you were to come in and 'bare your soul' to others so that a tension reduction could be achieved. The sessions proved mentally and physically fatiguing to me because of this unnatural pressure."

2. "On certain days I would feel like bringing things up for discussion, on others I wouldn't feel like saying anything. It seemed that these sessions tried to create a forced group identity by involving all its participants in discussion. I resisted these attempts to compromise my own feeling and those of others to achieve a 'group solidarity.' I think we should all realize that a group is made up of specific individuals--some open, some closed."

3. "No, it was not helpful to me to attend the group sessions, largely because of my own inhibitions. I am reluctant to express my feelings to a

large group of people that I do not completely trust, which includes most of the members of the group."

4. "The Wednesday group sessions definitely facilitated my learning. Working on the assumption that communication is essential to learning, I feel that the Wednesday sessions not only enhanced my listening and articulating skills, but also made me aware of and sensitive to other signals (non-verbal communication). They also helped me to explore beyond the content of what someone was saying to the why of what they were saying."

5. "The Wednesday sessions and especially that big group session pointed up the fact that we weren't really sensitive to each others feeling as separate people and subsequently a lot of us began listening to each other for the first time. And not being afraid to admit that we needed one another to hear us. This feeling not only embodies a student-centered classroom, but led us toward working out problems together; not trying to force answers on anyone who didn't agree and really working together as a group by trying different methods according to our individual feelings for the benefit of the rest of the group seeing the outcomes."

6. "Interpersonal and personal growth are perhaps the most important part of teacher preparation programs, and perhaps more significant in the long run than specific skills."

"The Wednesday sessions were great because they made me aware for the first time of group processes. What I mean is I found that what a group says is quite often not what the individuals are saying. If you take a step back

you can actually observe a larger thing happening. This must be a valuable tool for a teacher to possess."

7. "The Wednesday group sessions were an essential part of our program. They gave me a better understanding of myself and the other people I was working with. These sessions also provided a climate whereby things that were troubling people could be discussed whether or not they had to do with the program."

8. "The Wednesday sessions provided a time during which we could work out group as well as personal hang-ups. It was a way of letting each know what others in the group were thinking. Without these sessions I probably never would have known what certain people were thinking or feeling. There were many times when I was amazed at what people said--proving how little I understood others in the group. I think the sessions made us all realize how difficult it is for people to open up and trust one another, no matter how closely or how long they've worked together."

9. "The Wednesday group sessions were somewhat helpful to me. These sessions brought to the surface many latent problems in me. These problems were not concerned with education."

10. "The Wednesday group sessions facilitated my learning in that they made me more aware of certain aspects of myself and my defenses, the way groups and individuals operate, the defenses used, the impact individuals can have on a group and on one another, etc."

"They helped me to cope with the problems of 503. At times they kept me

talking to certain members of the group. Besides keeping up, and in some cases building, my communication with the others, the Wednesday sessions gave me a look at myself. I saw the contradiction in what I was saying and what I was feeling about myself and others, and they helped myself come to grips with myself. The sessions helped me become more real and honest with myself and others, and this is the best thing I can carry into any classroom."

Thus far, this chapter has attempted to evaluate the microteaching course according to its stated objectives. The data for the most part were considered as they pertained to specific objectives. The section which follows, however, will describe and analyze data which pertains to the course as a whole.

As was mentioned by several students, the inductive method can be extremely frustrating, producing much anxiety. The 3 following graphs show the mean levels of 3 aspects of the course for 18 students as they retrospectively reported interest in 503, anxiety about 503, and respect for and appreciation of teaching. For each graph 70 percent of the students felt confident of the validity of their ratings, 15 percent uncertain, and 15 percent unconfident.

Specific comparisons and trend analysis of the means* showed significant changes over time. In terms of interest, the 15 week period was characterized by a significantly higher level of interest during the 5 weeks teaching of Sayre students while the 7 weeks prior to the Sayre students and the 3 weeks after them were equivalent and lower. Significance was reached at the .05 level. Anxiety was found to be a monotonically decreasing function over time with the linear trend significant at the .01 level. Respect for teaching was a monotonically increasing function over time with the linear trend significant at the .01 level.

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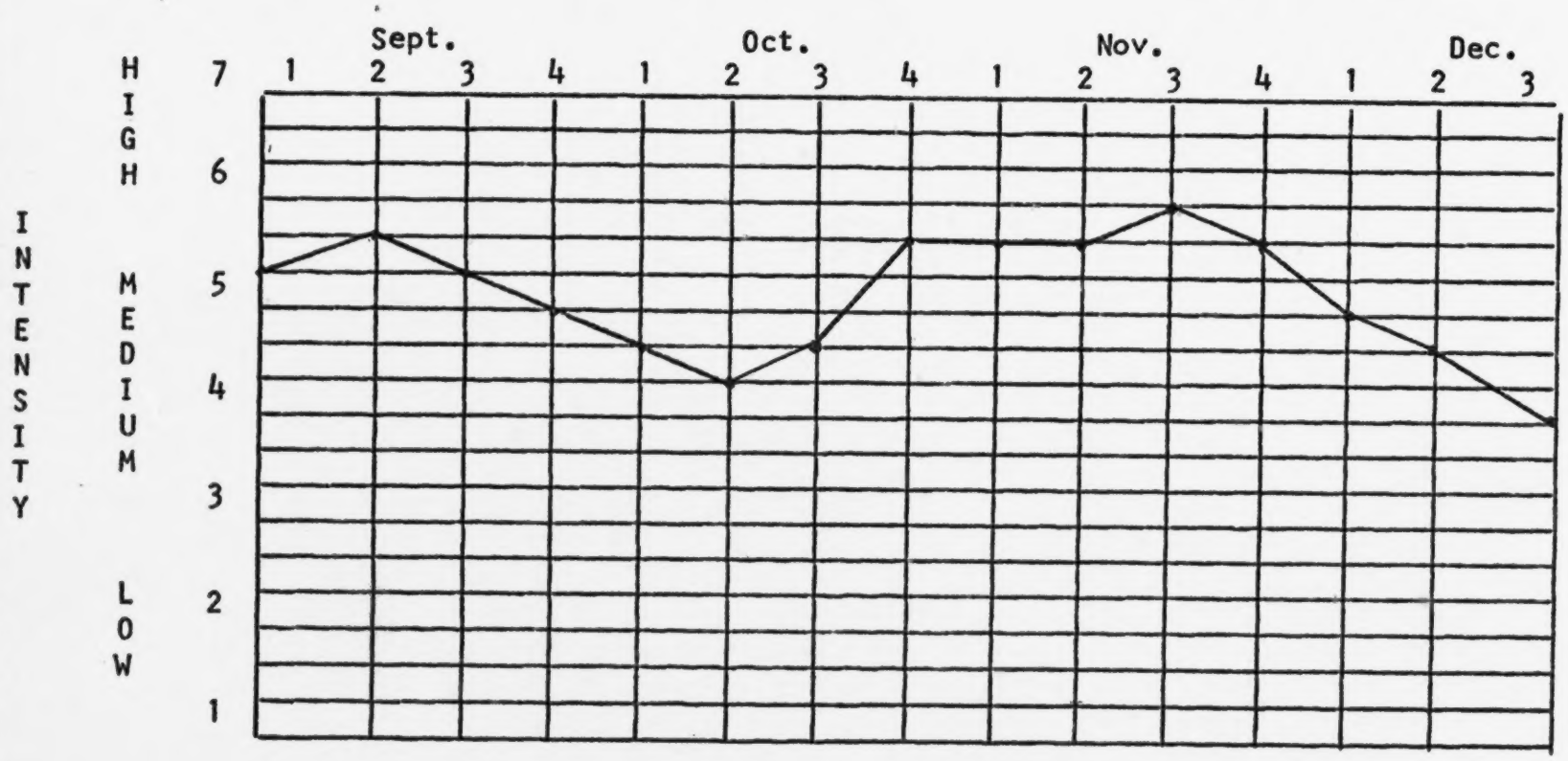
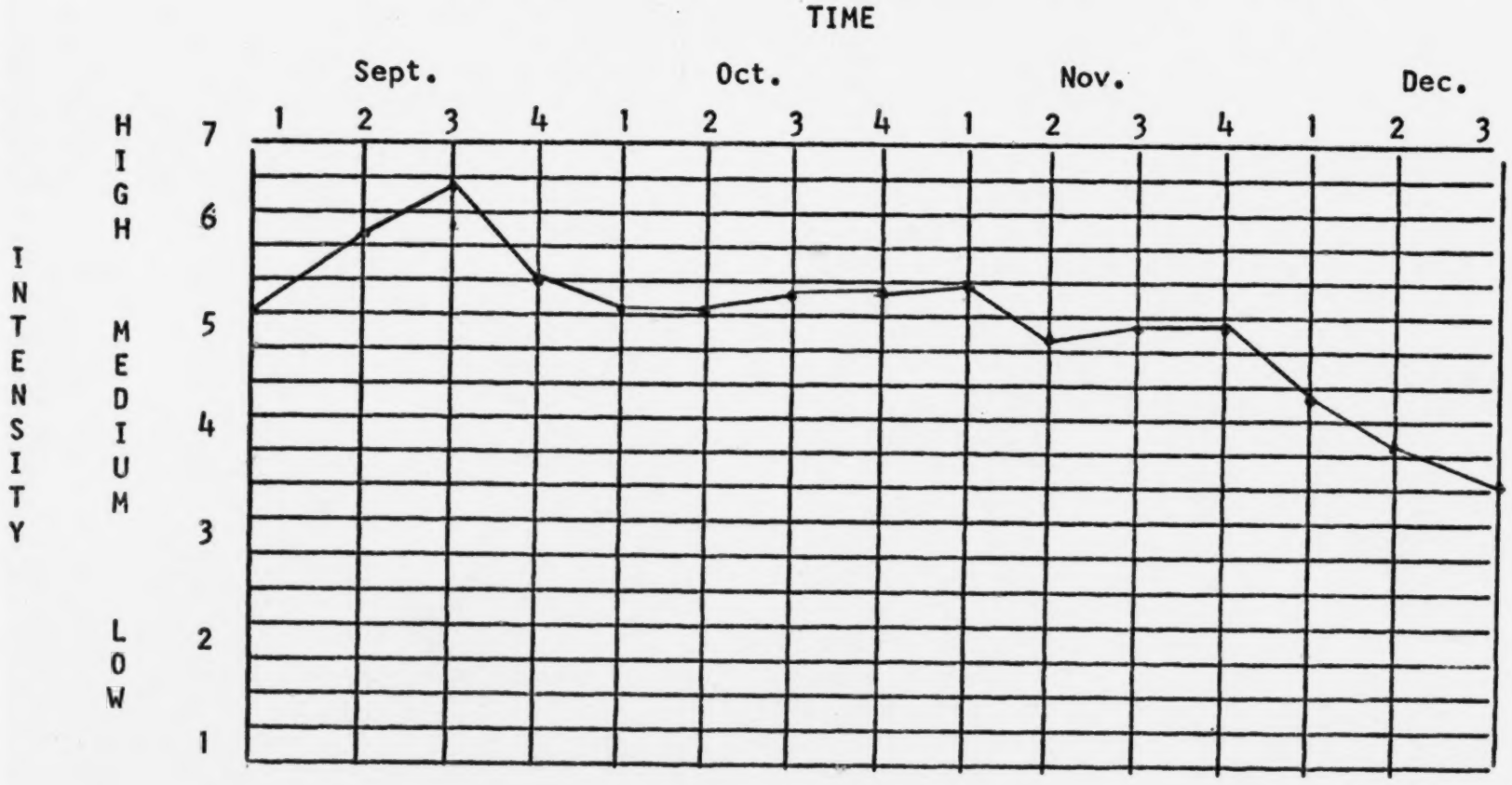
* B. J. Winer, Statistical Principles in Experimental Design. New York: McGraw-Hill Book Co., pp. 354-359, 1962.

INTEREST IN MICROTEACHING

TIME

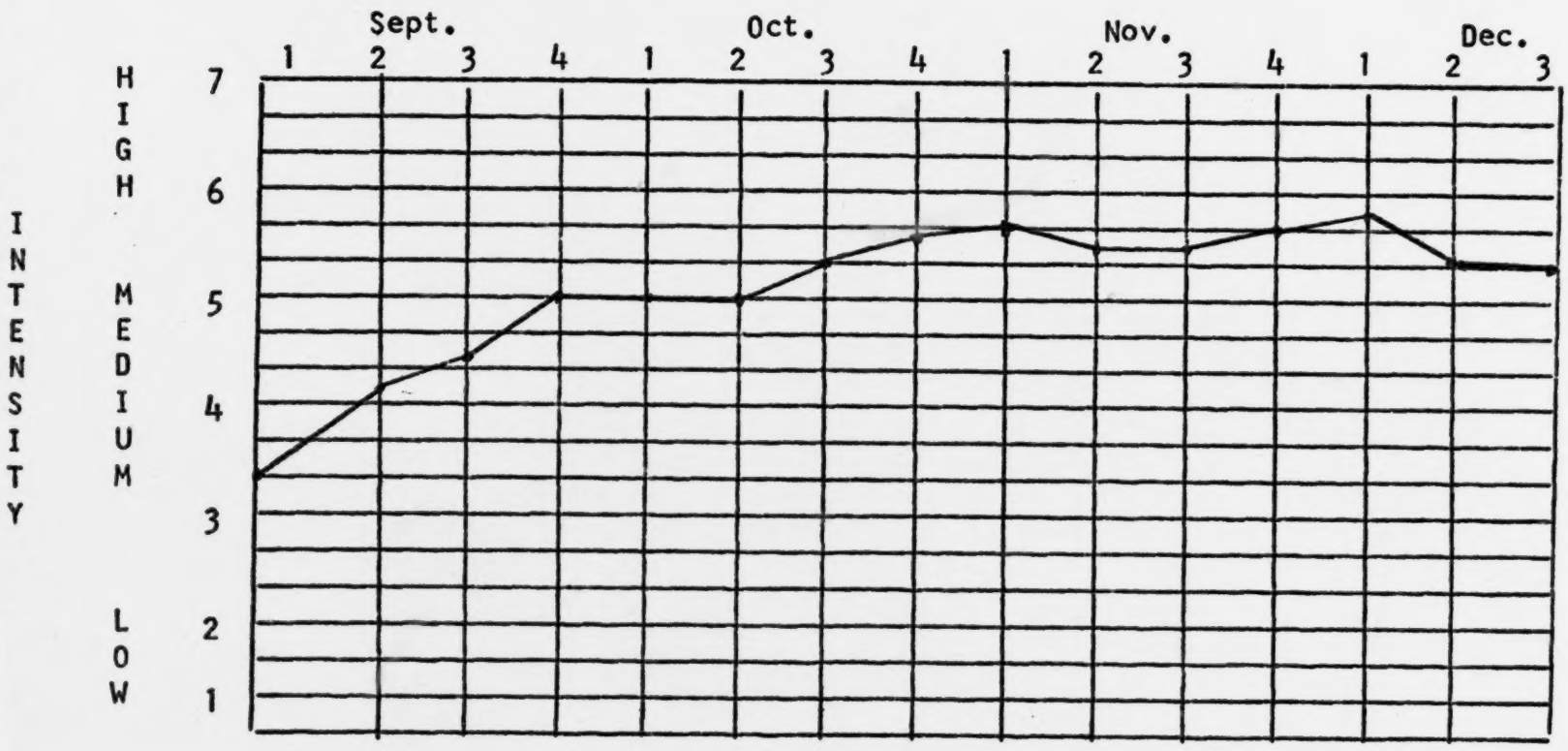


ANXIETY ABOUT MICROTEACHING



RESPECT AND APPRECIATION FOR TEACHING

TIME



Interview Data With the Micropupils

On December 12, 1969, which was the last day of microteaching, Dr. Gibboney, at the request of his students, interviewed all of the Sayre pupils who had been involved in the microteaching experience. He wanted to determine, primarily, whether these students believed they had derived any benefits from their participation in the experience and, if so, what they believed these benefits to be. Since the micropupils had been broken down into 2 groups, each working with a different group of microteachers, 2 interviews were conducted. Each was transcribed on videotape for future analysis. The Sayre students were not acquainted with the persons operating the equipment for their particular interview.

The first question asked of the students concerned the type of activities which they performed at the Sayre Co-operative University Center, an annex of Sayre Junior High School which operates an "enrichment program". (The "University" reference in the title is not functional.)

The students responded that their activities there were largely limited to "taking notes and listening to the teacher," although they also took trips in the community.

The remainder of the interview consisted of a solicitation of feelings regarding involvement in the Friday morning taping sessions. So eager were the students to give their reactions to the experience that in response to the question, "Would you rather be at SCUC or Sayre?" all of the students

answered that they would prefer to remain at Penn. The reasons that they cited were the greater freedom allowed and the fact that they felt it was easier to learn there. One of the boys commented that "there (Penn) they let you act out what's going on: you're a part of what's happening. You do more here." This was, in part, a reference to some role-playing activities in which the students were involved.

All of the students said that they were interested in coming to the Graduate School of Education on Friday mornings and that at no time did they have any misgivings about their experience. The students said that they thought it would be fun to be a part of a class which was limited in size and taught by people who were learning to be teachers. In this view also, the Sayre pupils indicated that they rapidly became accustomed to the videotape equipment and that "being on camera" did not bother them.

When asked what they liked best about the lessons, and what, if anything they thought they had learned, the students demonstrated an ability to recall specific lessons. Among those cited in particular were certain lessons in mathmatics and social studies. The students felt that they derived certain practical information from these lessons, such as a knowledge of consumer fraud. They also responded that they had learned a great deal about cultures and sub-cultures. When asked by the interviewer to define these terms they showed an ability to do so.

When asked to compare their "teachers" at Penn with those who normally taught them, the students said they believed the Penn teachers were better.

Their reasons for this judgment centered primarily around a belief that the microteachers were more interested in the class as individuals and hence taught more relevant lessons and tended not to "chant" as much. They stated that there was nothing about the lessons which they did not like. The pupils felt that "they (microteachers) tried to give you everything they could." Finally, the Sayre pupils said that if a teacher could demonstrate an ability to "get something across to you" in an 8-10 minute lesson, he could undoubtedly give you a good lesson in 45 minutes.

The reaction of the Sayre pupils to the lessons they were taught were unanimously positive. Certainly some of this reaction can be ascribed to the novelty of the situation, the brevity of the lessons, and to the fact that the students were able to take half a day "off" from their regular classes. Their comments indicate that the pupils perceived some benefits from their lessons, citing both content and process variables.

The comments from the Sayre students are presented only because the authors believe that no worthy evaluation of teaching can ignore the student. No comparison, most certainly, can be made between preservice and experienced teachers teaching in totally different environments.

Chapter IV

An Evaluation of the Practicum Experience (504) According to its Stated Objectives

A Description of the Course

This course was designed to provide the experimental students with an opportunity to further develop the skills, concepts, and values learned thus far in the program in a real setting. The course was given in the Spring Semester, January, 1970.

Four practicum locations were established. The students chose the location in which they wanted to work. The 4 schools were: The West Philadelphia Community Free School (WPCFS), grades 9-12, an organizational unit of the Philadelphia School System; The Parkway School, grades 9-12, also part of the Philadelphia School System; 2 Learning Centers, established in Philadelphia elementary schools, grades K-6, also a part of the school system; and Sayre Junior High School, grades 7-9, an urban school in West Philadelphia.

These schools were chosen because they offered a range of "institutional styles," and because most of them provided what was judged to be excellent environments within which to pursue the task of becoming a good beginning teacher in a manner consistent with the rationale underlying the program.

Enrollment in 504 dropped from the 19 students in 503 to 17. Of the 2

students not taking the practicum, 1 dropped out of the program to pursue a doctorate in curriculum and instruction at the University of Pennsylvania. The other student developed a serious illness at the beginning of the course from which she died in May.

Five students were placed at Parkway, 7 at the West Philadelphia Community Free School, 3 elected to go to Sayre, and 2 chose the Learning Centers. The 7 students at WPCFS included 2 who transferred early in the semester from Sayre.

Duties assigned to the student teachers varied according to the schools in which they were placed. With the exception of Sayre, all of the placements were full time. At Parkway and the West Philadelphia Community Free School, the experimental students were responsible for a full roster of classes; at the Learning Centers each student worked directly under an experienced teacher whose roster he shared. The students at Sayre spent their mornings at the school and were assigned responsibility for 1 section of students with the remainder of the time spent in assisting their cooperating teacher and in observation.

The only "traditional" school represented in the practicum was Sayre Junior High School. It is interesting to note that of the 4 Black students, 3 selected this school; 1 selected the West Philadelphia Community Free School prior to her hospitalization. Thus, with the exception of the Black student who chose the WPCFS, all of the students placed in "experimental" schools were White.

Most of the White students believed that traditional schools were bound by too many constraints which would inhibit attempts at indirect teaching. Most of the Black students felt an obligation to work in a "typical" inner-city school because most urban schools were similar to Sayre. They also stated that they felt the White students were "copping out" in choosing experimental-type schools.

Objectives for the Course

The 5 objectives for 504 are listed below.

A. "To test and improve the personal and professional skills and values previously developed in the program in a real educational setting which reflects an experimental approach to education."

B. "To internalize good models of teaching through working relationships with educators who develop and teach in learning environments which most students and many professional educators would judge to be actually or potentially more conducive to learning than those typically found in urban and suburban schools."

C. "To increase the motivation to become an excellent teacher and to deepen one's concept of teaching."

D. "To increase one's knowledge of and the ability to evaluate critically the experimental school in which the practicum was undertaken."

E. "To begin to develop a workable plan which will permit the student to apply the skills and values he has learned to this point during his first year

of full-time teaching."

Objective A, the primary objective for 504, will be evaluated in the following sections on the basis of questionnaire and interaction analysis data. Questionnaire responses of the Experimental Program students will be compared with responses to parallel questions made by a group of students in 2 other GSE teacher education programs. All students were full time, pursuing the M.S. degree in either elementary or secondary teaching. The secondary students were in an intern program in which they spent half-time teaching in an urban school.

Evaluation of Objective A

The questionnaire to the experimental and comparison students was completed at the end of the semester. Copies of these questionnaires may be found in Appendix 13.

There were 17 students in the Experimental Program (EP) and 18 in the Comparison Group (CG). Five CG questionnaires were not returned. The CG was made up of students who were in small informal groups that the senior author chanced to see within the GSE. No student in the Comparison Group had formal or sustained contact with any of the writers.

Responses to the questionnaire data will be treated in the next section.

Transferability of Teaching Skills

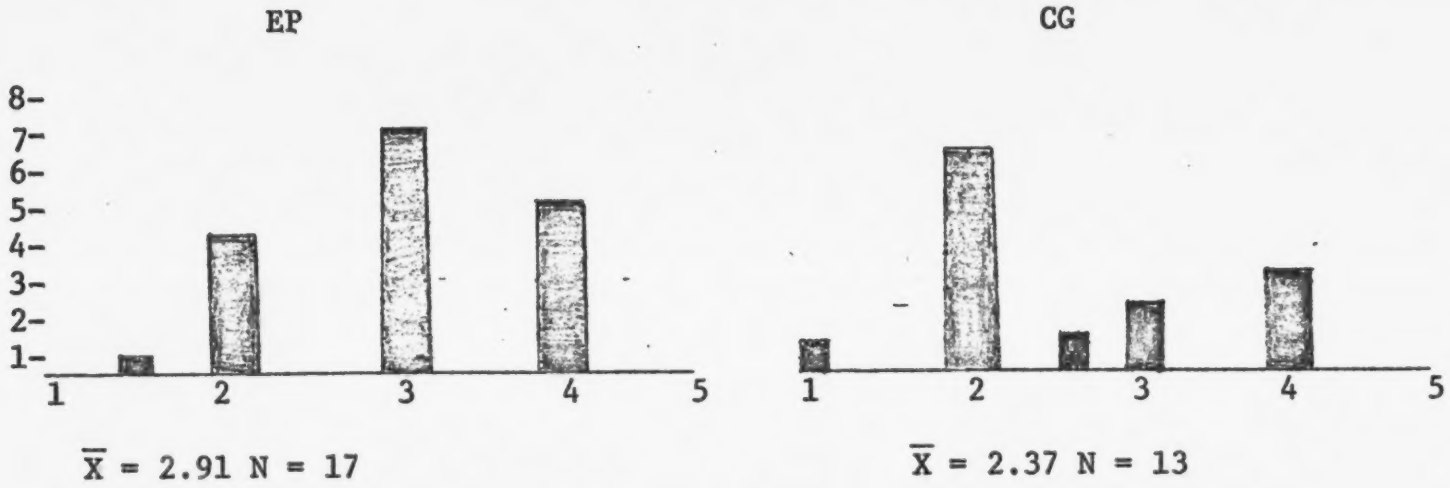
The first question asked of students in the EP was: "Were half or more

of the skills learned in microteaching transferable to your present teaching situation?" For the CG, the phrase "methods course" was substituted for "microteaching."

The responses, given on a 1 to 5 scale with 3 indicating half of the skills, are given in the bar graph below.

Chart 1

Responses of EP and CG students on
Transferability of Teaching Skills



$\overline{X}$ = 2.91 N = 17

$\overline{X}$ = 2.37 N = 13

F = 1.24 (df = 1, 28) NS

The 2 distributions show no significant difference although the Experimental Group mean is higher, near the midpoint on the continuum. The only comments on this question came from 2 experimental students who stated (embarassingly enough) that they did not know what the basic skills were. They both gave a

response of 2.0.

Twelve of the 17 EP students, 70 percent, felt that half or more of the skills previously learned in microteaching were transferable to the practicum. Five of the 13 students in the CG, 38 percent, felt that half or more of the skills learned in their methods courses were transferable to student teaching.

Improvement of Teaching Skills

Responses to Question 2, "Has your present situation allowed for improvement and refinement of these skills?" are given below (See Appendix 13).

Table 1

Responses of the EP and CG Students on the Improvement of Skills in their Present Teaching Situation

Groups	Responses		No Response
	Yes	No	
EP	13	3	1
CG			
Elementary	4	1	2*
Intern	4	2	0

*Two students answered "yes and no."

Eighty-two percent of the experimental group replied affirmatively to the question, compared to 62 percent in the comparison group. A chi square was performed on the total responses for both groups to determine if the difference was significant. This test was performed despite the belief by some statisticians that a chi square is inappropriate for these data since some cells contain fewer than 5 entries. The resulting chi square equalled 2.9 (with df = 2) which is equivalent to a P of .25 and thus insignificant.

The comments of the students giving a "no" response differ qualitatively between the 2 groups. In the EP group, 2 of the 3 negative responses state that the differences between the microteaching and the practicum experiences make comparison difficult (the other response was from a student at Sayre who felt the environment there inhibited the improvement of skills.) All 3 "no" responses from the CG state that a traditional school environment inhibited the development of skills.

Judgmental Comparison of Direct-Indirect Behavior by Subject

Question 3 asked the students to respond to the following statement: "Direct teaching techniques are generally more effective than indirect teaching methods in modification of student values and increasing the desire to learn in a course in mathematics, English, science, and social studies." It was believed that more of the students in the EP group would respond that

the indirect method was more effective than would the number of students in the CG.

A rating of 1 signified strong disagreement with the direct method and a more indirect attitude; a rating of 3 indicated equal preference; and a rating of 5, strong agreement and a more direct attitude. Means for each total group are reported below.

Three interns failed to respond to the question, stating that they did not understand it. (A definition of these terms was given when the questionnaire was administered.)

Table 2

Judgments of the CG and EP Groups Relating to the Effectiveness of Direct-Indirect Methods in Achieving Affective Objectives

Subject	CG Int.	CG Elem.	Total CG Mean*	EP	F	P
Mathematics	2.5	2.1	2.2	2.5	.5	NS
English	3.6	1.9	2.45	1.75	2.77	.11
Science	3.5	1.9	2.3	2.13	.7	NS
Social Studies	3.5	1.8	2.2	1.63	2.30	.20

*Mean is computed from each individual response in CG.

It can be seen that the only means greater than 3, indicating a more direct attitude, came from the few interns that did respond (N=2 for all

except English where N=3). N=7 for the Elementary group. The means of the CG and EP groups were compared via simple F tests with df = 1,23 for all except English where df = 1,28. It can be seen that the means for math and science are equivalent between the CG and EP. The EP group means for English and social studies are more in the indirect direction but do not reach a significance level. Within the total CG means there is little difference across subject areas; however, analysis of variance on specific comparisons of the EP judgments show that mathematics and science combined are viewed more direct than English and social studies combined (F = 9.37, df = 1,45 p .01). A further comparison shows mathematics to be rated more direct than the other 3 subjects combined by students in the EP (F = 8.0, df = 1,45, p .01).

The implications of the results for Objective A show that while no significant differences exist between the 2 groups, the experimental students reflect values that are predominatly indirect with a tendency to regard mathematics as the least indirect, science next, and English and social studies equivalent and the most indirect. It is interesting to note that the means for the elementary education students are lower than the EP group means in 2 subjects, mathematics and science.

Influence of the Practicum on Perceived Teaching Ability

Question 13 on the evaluation questionnaire (which corresponds to question

12 on the questionnaire given to the comparison group) asked the students to make a judgment regarding their growth as teachers over the semester, according to a "yes" and "no" forced choice response. The question asked, "Do you feel that your ability as a teacher is significantly greater now than at the end of microteaching?" For the comparison group the words "fall semester" were substituted for "microteaching."

In the EP group, 65 percent of the students responded positively as compared to a 77 percent positive response for the comparison group. Twenty-four percent of the EP group and 7 percent of the CG responded negatively. Six percent of the EP group did not respond to the question; 15 percent of the comparison group did not respond. An additional 6 percent of the EP group responded "yes and no" to the question.

Table 3

Responses of the EP and CG Groups to Perceived Improvement in Teaching Ability During the Practicum

Group	Yes	No	Yes&No	No Response
Experimental				
Free School	5	2		
Parkway	3	0	1	1
Sayre	2	1		
Learning Centers	1	1		
Total	11	4	1	1
Comparison				
Elementary	5	1		1
Intern	5	0		1
Total	10	1		2

Because there appeared to be a possibly significant difference in the percentages of "yes" and "no" responses between the 2 total groups, a chi square was performed. On this test the chi square was equal to 1.57 (df = 2) which was not significant.

The quality of the comments elicited by the question differ between the 2 groups, as the following excerpts indicate. Each of the following passages is a composite of all the affirmative responses, differentiated by school for the EP group and by program for the CG. Since the comments were short, they are quoted below. Ellipses separate the comments of individual students.

Free School (5 affirmative responses)

"The practicum was very valuable. . .I am more comfortable dealing with frustration. My skills have improved and I have a greater knowledge of material and the students' problems. . .I am less nervous and more relaxed. Students aren't to be feared."

Parkway (3 affirmative responses)

"I have learned much working with kids in a realistic situation especially in the area of student behavior and the degree of authority needed in the classroom. . .I feel more confident. I know what to do and how to do it."

Sayre (2 affirmative responses)

"I became more aware of student needs as opposed to my own concerning what is to be taught. . .I have become more knowledgeable in the area of discipline and more confident."

Learning Center (1 affirmative response)

"I have clarified my concept of teaching, am more excited about it. I have clarified my role."

Despite the different environments reflected by each placement, the comments reflect a certain commonality. Ten of these responses, whether collected from students at the traditional Sayre Junior High School, or from those at the more experimental schools, imply a concern with student behavior.

Intern (5 affirmative responses, 2 students commented)

"I know the ropes of controlling a class. . .I can better cope with discipline and have more confidence. I am ready to teach something."

Elementary Education (5 affirmative responses, 2 students commented)

"My voice is louder and I have learned to act. . .I am aware of and more comfortable with the teacher role and more confident because of student teaching."

Thus the comparison group, with only 4 students commenting, seems to view the teaching act as more teacher-centered. Experimental students, however, while cognizant of the teacher role, appear to include other variables such as student concern as well.

The 4 negative responses from the Experimental students are given below. Two comments came from students at the Free School. One stated that "There are so many new variables like more students, paper work, etc. . .I have a long way to go." The negative comment from Sayre blamed lack of growth on

the classroom climate: "Because of the classroom structure I haven't been able to develop new and creative lessons." The remaining comment, made by a student at a Learning Center, stated that she had "not been involved in that much teaching."

The negative comments in the CG were too few to make even a gross qualitative comparison with the EP students. Since so few of the Intern group commented on the question, and since the students in the Intern group are preparing for secondary teaching as are the students in the EP, the data to this question are ambiguous and no firm conclusions can be drawn.

Increased Knowledge of Pupils

The responses to the question asking whether or not the practicum (EP students) or the program as a whole (CG) increased understanding of pupils are given below.

Table 4

Increased Understanding of Pupils as Perceived by Experimental and Comparison Groups

Group	Yes	No	Yes&No	No Response
Experimental	17	0	0	0
Comparison				
Intern	3	2	0	1
Elementary	3	2	1	1
Total	6	4	1	2

All of the EP students believed that the practicum had increased their understanding of urban pupils. Nine students commented on the question. Thirty percent of the students (5) specifically mentioned that close personal interaction with students increased their knowledge and understanding of the pupils. One student noted the free atmosphere of the experimental school as being conducive to learning about pupils. Two other students commented on the experimental environment: one said that it allowed pupils to express their anxiety, the other stated that in such an enviornment one can see the whole "spectrum of human relationships." Lastly, one student mentioned that interaction with pupils forced him to respect their intellectual ability.

The comments from the 7 students in the CG are given below.

Intern Group

Yes: "What they think and expect of school. Understanding of Black students."

No: "Teaching increased knowledge but the program didn't." (2 students)

Elementary Group

Yes: "Student teaching." (2 students)

No: "Not enough contact with pupils. Hardly saw kids except for student teaching."

"Many more questions than before but too many unanswered."

These data may indicate that experimental school placements increase the understanding of urban pupils as perceived by the preservice teachers in the

experimental program.

An assessment on whether or not Objective A was achieved will be made at the end of the chapter after the data on teacher behavior have been analyzed.

Analysis of the Teaching Behavior of the Experimental Students During the Practicum

The presentation of data relative to Objective A, which relates to improving the personal and professional skills and values previously learned, continues in this section with the analysis of teaching behavior in a "real setting." The primary criterion, as in the microteaching analysis, will be the degree of indirect teaching behavior demonstrated by the students in their practicum experience.

One of the best means of assessing the attainment of Objective A was to determine if the pattern of indirect teaching behavior valued and demonstrated by the students in 503 was also demonstrated in 504. The Flanders' interaction analysis system and the Non-verbal Category System, developed for this evaluation, were used to categorize teaching behaviors.

The students in the practicum announced their teaching schedule for a given week and 2 observers came, unannounced, to record their teaching behavior. The 2 students in the Learning Center placements were not observed for interaction analysis because the predominant language in both centers was Spanish and they were both elementary schools. One student at Parkway flatly refused to allow the interaction observers to record her class because she felt that it was folly to try objectively to evaluate a complex teacher education program.

The <u>percentage</u> matrices that follow were computed for each teacher in a manner identical to that described in 503. In addition, a grand matrix was computed over <u>all</u> teachers, and a grand matrix was computed for the teachers

in each of the 3 schools, Sayre, Parkway, and the Free School.

The I/D and S/T ratios, teacher and student talk percentages, 8 criteria measures of indirect or direct behavior, and the percentages of non-verbal behavior are reported. In addition, an anecdotal description of each teacher's class is given. Three ratios: Teacher Response Ratio (TRR), Teacher Question Ratio (TQR), and a Pupil Interaction Ratio (PIR) are also given for the 4 grand matrices because the frequencies are large enough to permit non-spurious results. The TRR is computed by summing column totals of Categories 1, 2, and 3 and dividing by the sum of column totals of Categories 1, 2, 3, 6, and 7. The TQR is obtained by dividing the total of Category 4 by 4 and 5 column totals. The PIR is found by dividing total Category 9 by 8 and 9 column totals. These 3 ratios are given for the grand matrices at the end of this section.

Norms for these ratios have been established by Flanders and are used in this study for purposes of comparison.[1]

For the convenience of the reader, the cut-off points for criteria A through H are given below.

A Column 3 total
Direct -- 2% or less
Indirect-- 9% or more

B Column 4 total
Direct -- 8% or less
Indirect-- 11% or more

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[1] Ned A. Flanders, Analyzing Teaching Behavior, Reading, Massachusetts: Addison-Wesley Publishing Co., 1970, 101-103.

C Column 5 total
Direct -- 30% or more
Indirect-- 25% or less

D Cell 5-5 as a percentage of column 5
Direct -- 80% or more
Indirect-- 50% or less

E Column 6 total
Direct -- 8% or more
Indirect-- 4% or less

F Column 7 total
Direct -- 5% or more
Indirect-- 1% or less

G Cell 4-8 as a percentage of column 8
Direct -- 50% or more
Indirect-- 30% or less

H Cell 9-9 relative to other cells in column 9
Direct -- another cell larger than 9-9
Indirect-- 9-9 is largest cell in column

Percent Matrix for Teacher 1
Sayre Junior High School

	1	2	3	4	5	6	7	8	9	10
1										
2										
3				1					1	
4				2				2	7	3
5					5				2	
6								1		
7									1	
8				2				12	1	
9			2	5	1		1		26	4
10				2	1	1	1	1	3	3
Column total			3	14	8	2	3	16	41	12

△ = Indirect □ = Direct

I/D = 1.30 S/T = 1.90
Teacher Talk= 31% Student talk=57

Criteria for Direct-Indirect Behavior

A	B	C	D	E	F	G	H
NS	I	I	NS	I	NS	I	I

Lesson Description

24 pupils seated without desks in large circle; seminar discussion of the newspaper "Muhammed Speaks." Discussed points in platform of Muslims: police brutality, equal opportunity, interracial marriage, integration.

Non-verbal Categories

100% total class organization; non-verbal cues: 1 pos., 6 neg. to quiet class.

This matrix may be characterized as indirect. Both ratios are extremely high, a fact which is reflected in the percentages of teacher and student talk. From the infrequent use of lecture (Column Total 5) and the corresponding high total in Cell 9-9, it is evident that a large part of the lesson consisted of students discussing their own ideas.

The large amount of questioning by the teacher, which met the indirect Criterion B, elicited prolonged student comments, not rapid question-answer behavior (Cell 4-8), which satisfied indirect Criterion G. The lesson was further characterized by very infrequent use of teacher criticism (Column Total 6) which was sufficient to meet the indirect Criterion E. Criteria A, D, and F were not satisfied in either direction, thus the use of praise, extended lecture, and criticism did not conform to either an indirect or direct pattern.

The non-verbal categorization system indicates that on 6 occasions negative non-verbal cues were used to quiet the class.

Percent Matrix for Teacher 2
Sayre Junior High School

	1	2	3	4	5	6	7	8	9	10
1										
2								1	1	
3			1	2	3			1	2	1
4			1	2				7	2	
5				2	5		1	4	5	1
6						1		1	2	1
7				1			1	2		
8		1	4	3	6	1	1	6	1	
9		1	5	2	3	1	1		8	2
10				1	2	1			1	2
Column total		2	10	13	18	4	4	21	22	6

△ = Indirect □ = Direct

I/D = .97 S/T = .84
Teacher Talk= 51% Student talk= 4[illegible]%

Criteria for Direct-Indirect Behavior

A	B	C	D	E	F	G	H
I	I	I	I	I	NS	NS	I

Lesson Description

History class on Civil War; used maps.

Non-verbal Categories

100% total class; 25% media (map); non-verbal cues: 6 neg. to quiet class.

The I/D ratio meets the indirect cut-off of .70; the S/T ratio reflects higher than average student talk. Although the percentage of teacher talk was 51 percent, only 18 percent of such talk was lecture as indicated in the Column 5 Total, which met the indirect criterion for C. Six of the 8 criteria measures indicate indirect behaviors; the other 2 were not significant (F and G). Thus the use of criticism and rapid question-answer behaviors did not denote any particular pattern.

The 2 columns of student talk (8 and 9) are about equal, indicating that the students were using their own ideas as much as they responded to teacher-elicited ideas. Percentage of occurrence varies little among the Column 9 cells, but since 9-9 is the largest cell in the column, it satisfied Criterion H for indirectness. The other 5 criteria achieving indirectness were teacher-talk cells or columns and indicate the high frequency of student ideas and questioning, with a complementary infrequency of lecture, extended lecture, and commands.

The non-verbal system indicates that one-fourth of the class time media (in this case a map) was used. Also 6 negative non-verbal cues were used to quiet the class.

Percent Matrix for Teacher 3
Sayre Junior High School

	1	2	3	4	5	6	7	8	9	10
1										
2										
3								1		
4								2	1	1
5				1	9	3		1	1	1
6				1	1	8	1	4	3	
7						1	4	1	1	1
8			1		2	5	1	24		2
9				1	3	1	1		7	1
10						1	1	1	1	3
Column total			1	4	15	19	8	34	14	6

△= Indirect □= Direct

I/D = .12 S/T = 1.02
Teacher Talk= 46% Student talk= 48

Criteria for Direct-Indirect Behavior

A	B	C	D	E	F	G	H
D	D	I	NS	D	D	I	I

Lesson Description

Role playing--Black power conference with pupils as delegates in 5 small groups; picked topics to discuss from a list; later reported back to total class what was discussed by group. Teacher frequently talked to each group.

Non-verbal Categories

100% small groups; 50% teacher circulated; 3% pupils moved and interacted; 75% of pupils self-paced; 75% pupils selected topics; 12 neg. non-verbal cues to quiet class.

The matrix for Teacher 3 was recorded in an unusual class. Part of the lesson consisted of role-playing among the students; since recording of such behavior is specifically proscribed by Flanders no entries were made while it was in progress. (We would consider use of such a tactic to be evidence of indirect behavior.)

This lesson as a whole could be characterized as direct. The I/D ratio is very low and direct; the S/T ratio is high given the pattern of the total lesson.

The talk-percentages are about equal indicating that verbal behavior was shared between the teacher and students.

Criteria A, B, C, D, E, and F are indices of teacher behavior. That is, they reflect acceptance of student ideas, use of questioning, use of lecture and extended lecture, and use of commands and criticism. For this teacher, 4 of these 6 "teacher-reflective" criteria achieved directness (A, B, E, and F), with only 1 achieving indirectness, C, and 1 being nonsignificant, D. The direct trend of these 6 criteria is reflected in the low I/D ratio.

Criteria G and H, both of which are indirect, are indices of student behavior. They reflect a low incidence of student response to teacher-derived questions (Cell 4-8), although there were few questions (Column 4) and more evidence of prolonged student initiated responses (Cell 9-9).

The non-verbal system indicates the departure from traditional classroom behavior. Small groups, frequent teacher circulation, and pupil self-pacing

and topic selection are indicated here. Also noteworthy is the fact that the directive elements indicated in Columns 6 and 7 are also reflected by the use of teacher non-verbal negative cues which were employed primarily to quiet the class.

Percent Matrix for Teacher 4
Parkway School

	1	2	3	4	5	6	7	8	9	10
1			1							
2			1		1					
3			1		4	1		1	2	
4					1			7	2	
5				3	17	2		6	4	
6				1	1	3		3	2	
7										
8	1	1	3	4	4	1		2	3	1
9		1	4	2	4	2			5	
10										
Column total	1	2	9	10	32	10		19	18	1

△ = Indirect □ = Direct

I/D = .52 S/T = .58
Teacher Talk= 62% Student talk= 37%

Criteria for Direct-Indirect Behavior

A	B	C	D	E	F	G	H
I	NS	D	NS	D	I	NS	I

Lesson Description

Pre-algebra remedial class, 12 pupils; teacher handed out programmed sheets for self-paced work. He circulated and assisted those who requested help. He left room twice, for a total of 50 secs.

Non-verbal Categories

1-to-1 organization; 75% teacher circulated; 10% pupils moved and positively interacted; 8% pupils moved and not interact; 1% pupils moved and disrupted; 100% pupils self-paced.

Teacher 4 conducted a self-paced lesson in mathematics with a small number of pupils. The lesson consisted of the teacher working on a 1-to-1 basis with students as they needed help. The matrix can be characterized as basically indirect with the non-verbal categories "tipping the scale" to the indirect pattern. The I/D ratio is indirect; the S/T ratio is low, but the tutorial nature of the lesson accounts for this. The criteria indicate an indirect pattern with 3 criteria indirect, 3 nonsignificant, and 2 direct. The 1-to-1 dialogues were characterized by a large amount of acceptance of student ideas attaining Criterion A. Lecture met the direct criteria although it was not extended since Criterion D was nonsignificant. Furthermore, in these dialogues, the students did show extended expression of their ideas as indicated in the data being significant for Criterion H. Criterion E indicates that extensive directions were given while Criterion F shows that little criticism occurred.

The non-verbal categories indicate indirect behavior: self-pacing of the pupils, physical movement of the pupils, 1-to-1 class organization, and the circulation of the teacher within the group for 75 percent of the observation period.

Percent Matrix for Teacher 5
Parkway School

	1	2	3	4	5	6	7	8	9	10
1										
2									1	
3				1	1				2	
4				3					8	1
5					5				2	
6										
7										
8										
9		1	5	5	1	1			53	2
10				1					2	1
Column total		1	5	12	8	1			68	4

△ = Indirect □ = Direct

I/D = 2.00 S/T = 2.52
Teacher Talk= 28% Student talk= 68%

Criteria for Direct-Indirect Behavior

A	B	C	D	E	F	G	H
NS	I	I	NS	I	I	D	I

Lesson Description

Small conference room in Meridian Engineering Bldg. Crowded with 14 students, one-third seated on floor. Class in Socialist Realism, student book report and seminar discussion.

Non-verbal Categories

100% total group; 2% pupils moved and interacted; 1% pupils moved and did not interact; 1 pos. non-verbal cue.

The matrix for Teacher 5 is indirect. The 2 ratios are extremely high and indirect. The criteria are predominantly indirect; the 1 direct cell, (4-8, Criterion G), can be judged spurious since there was less than one half of one percent occurrence in Category 8. The salient fact of the lesson is the extremely high amount of extended student-initiated talk, Cell 9-9, which achieved the indirect Criterion H. The matrix is further characterized by infrequent lecture and a relative paucity of directions and criticisms (Columns 6 and 7) all of which achieved the indirect criteria. Criteria A and D were nonsignificant. The frequency of questioning was high enough to achieve the indirect Criterion B.

The non-verbal data are sparse, but those evident indicate pupil movement, an indirect indicator, which is very infrequent in classrooms taught by a teacher whose basic pattern is direct.

Percent Matrix for Teacher 6
West Philadelphia Free School

	1	2	3	4	5	6	7	8	9	10
1										
2										
3			1	1	1			1		
4				2				6	6	1
5				1	2			1	1	
6				1		2		1	1	
7				1			1		1	
8		1	1	4	1	2	1	29	1	
9			3	4	1	1		1	6	2
10				1		1		1	1	1
Column total		1	5	16	6	7	2	40	18	5

△= Indirect □= Direct

I/D = 1.50 S/T = 1.57
Teacher Talk= 37% Student talk= 58%

Criteria for Direct-Indirect Behavior

A	B	C	D	E	F	G	H
NS	I	I	I	NS	NS	I	NS

Lesson Description

3 other teachers in team, 15 students; teacher handed out modeling clay, pupils worked it until soft and then were blindfolded and instructed to make a dog. 10 minutes later blindfolds off and pupils looked at creations. Lesson was videotaped. Discussed work and watched their previous blindfolded actions on videotape. Teacher asked "feeling" questions about work. Instructed pupils to make of clay "How you felt when making the dog." 3 teachers circulated and interacted with pupils, questioning them about their feelings. 1 teacher engaged teacher leading lesson in conversation 6 times, limiting her interaction with the students.

Non-verbal Categories

100% total group organization; 50% of teachers circulated; 9% pupils moved and interacted; 10% moved and did not interact; 2% disrupted; 50% self-paced; 100% media; 4 pos. non-verbal cues.

Teacher 6 taught indirect lesson with very high I/D and S/T ratios. None of the criteria achieved directness while 4 of the 8 showed indirectness. Criteria C and D indicate that lecturing was infrequent and not prolonged when it did occur. Indirectness on Criterion B, extensive questioning, Column 4 total, is complemented by the large column 8 total with indirectness achieved on Criterion G, rapid question-answers being infrequent. Teacher questions were followed as often by student-initiated responses (Cell 4-9) as they were by teacher-directed responses (Cell 4-8). Thus, the 4-9 Cell was equal to the 9-9 Cell and Criterion H was nonsignificant.

The nature of the lesson was indirect as evidenced by the lesson description and the non-verbal behavior categories. The nature of this lesson necessitated some direction at the beginning of the lesson which produced the moderate Column 6 total.

The 100% use of media in an indirect manner and the 50% circulation of the teachers within the group are noteworthy. Despite the extent of pupil movement, only 2 percent was disruptive but it was not of sufficient magnitude to cause the teacher to alter the lesson she had planned.

Percent Matrix for Teacher 7
West Philadelphia Free School

	1	2	3	4	5	6	7	8	9	10
1										
2						1				
3			1	3	1				1	
4				3		1		1	6	
5					1	2		1		
6				1	1	11		4	1	1
7								1		
8			1	1	1	2	1	28		1
9		1	3	2	1	1			6	
10				1		1		1		2
Column total		1	6	11	5	19	2	35	15	6

△ = Indirect □ = Direct

I/D = .70 S/T = 1.14
Teacher Talk= 44% Student talk= 50%

Criteria for Direct-Indirect Behavior

A	B	C	D	E	F	G	H
NS	I	I	I	D	NS	I	NS

Lesson Description

Same lesson as Teacher #6: 25 students blindfolded to make clay dog. Only difference in discussion was noting during watching the videotape of "how dogs were made" i.e., what types of actions were employed. No second object was made.

Non-verbal Categories

100% total group; 17% teacher circulated; 1% pupils moved and interacted; 3% pupils moved and did not interact; 28% pupils self-paced; 100% media; 5 positive, 1 negative non-verbal cues. (Note: Less teacher motion and pupil self-pacing than #6 because of the discussion of videotapes and no making of second object.)

The matrix for Teacher 7 is indirect. The I/D ratio is indirect, and the S/T ratio is high as the percentages of student and teacher talk indicate. This matrix, in fact, represents an attempt on the part of the teacher to duplicate the lesson described in the preceding matrix. The 2 teachers represented in matrices 6 and 7 team-taught both of these lessons, with 1 leading during the first phase and the other leading during the second phase. Thus the patterns evidenced by both matrices are similar.

Like Matrix 7, this matrix achieves indirectness for criteria C and D indicating that lecture was infrequent and not prolonged. Indirectness on criteria B and G, combined with the equivalence between Cells 4-9 and 9-9, precisely duplicate the results attained for Teacher 6.

The only difference between Matrix 6 and Matrix 7 is in the increased amount of direction (Column Total 6, Criterion E) and extended directions (Cell 6-6) that occurred in Matrix 7. This was necessitated by the type of lesson taught. Its increased frequency here depressed the I/D ratio.

The non-verbal behaviors are predominately indirect with the fact that 28 percent of the total class time the pupils paced themselves being the most significant non-verbal characteristic.

Percent Matrix for Teacher 8
West Philadelphia Free School

	1	2	3	4	5	6	7	8	9	10
1										
2				1					1	
3		1	2	6	2	1		1	1	
4			1	3				4	14	
5				3	9			1	2	
6					1	1			1	
7										
8			2	2					1	
9		2	8	7	2	1			18	1
10				1					1	
Column total		3	13	22	14	3		5	38	1

△ = Indirect □ = Direct

I/D = 2.23 S/T = .78
Teacher Talk= 56% Student talk= 43%

Criteria for Direct-Indirect Behavior

A	B	C	D	E	F	G	H
I	I	I	NS	I	I	D	I

Lesson Description

10 pupils looked at and judged pictures they had taken and described why they liked them. The subjects were architectural or spatial. Class was social studies; Topic: Man Made Environment; students went into next room for overhead projection of pictures of churches to relate how a building can make an occupant feel and how a religious concept of man is reflected in church architecture.

Non-verbal Behaviors

100% total group; 17% pupils moved and interacted; 1% pupils moved and did not interact; 100% media; 3 pos. cues.

Matrix 8 reflects a very indirect lesson. The I/D ratio is extremely high, the S/T ratio is moderate, as are the percentages of student and teacher talk. The high I/D ratio is reflected in criteria A, B, C, D, E, and F, all of which achieved indirectness with the exception of D, which was nonsignificant.

Criterion G, though direct, is partially offset by a low Column 8 total; that is, while Cell 4-8 is the largest in the column, the column constitutes only 5 percent of the total matrix. Criterion H, which was indirect, reflects extended student-initiated talk, while Criterion A (Column Total 3) indicates acceptance of student ideas.

The non-verbal behaviors are predominately indirect, particularly the relatively high percentage of students who moved and interacted with no disruptions reported.

Percent Matrix for Teacher 9
West Philadelphia Free School

	1	2	3	4	5	6	7	8	9	10
1										
2			1						1	
3			2		3				5	
4				2	1			2	5	
5				3	11				2	
6					1					
7									1	
8					1				1	
9		1	7	4	1		1		44	1
10										
Column total		2	10	10	16	1	1	2	58	1

△ = Indirect □ = Direct

I/D = 1.22 S/T = 1.50
Teacher Talk= 39% Student talk= 60%

Criteria for Direct-Indirect Behavior

A	B	C	D	E	F	G	H
I	NS	I	NS	I	I	D	I

Lesson Description

2 teachers and 8 students; same lesson as in Matrix 8. 1 girl dominated the discussion with her ideas and her feelings.

Non-verbal Categories

100% total group; 2% pupils moved and interacted; 1% pupils moved and did not interact; 100% media; 4 positive cues.

Matrix 9 is indirect. Both ratios are high and indirect. Of significance, too, are the 2 percentages of talk. Teacher talk is low (Criterion C, Column Total 5 is indirect) which corresponds to the high percentage of student talk, most of which was prolonged and self-initiated (Criterion H, Cell 9-9). The fact that 1 student dominated the discussion limits the significance of Criterion H.

Criteria B and D (questioning and extended lecture) are nonsignificant while all the other criteria were indirect except G which, though direct, is spurious due to a low Column 8 total. Thus, there was a large degree of acceptance of student ideas, and an infrequent use of lecture, directions, and criticism.

The use of media and the modest amount of pupil movement are indicative of indirect teacher behavior.

Percent Matrix for Teacher 10
West Philadelphia Free School

	1	2	3	4	5	6	7	8	9	10
1										
2						1				
3			1	1	3			2	3	
4				1				2	5	
5			1	2	8	1			1	
6						1		1		
7										
8			3	1	1			17	2	
9		2	6	2				1	27	1
10									1	
Column total		2	10	9	13	2	1	23	39	2

△ = Indirect □ = Direct

I/D = 1.31 S/T = 1.69
Teacher Talk= 36% Student talk= 62%

Criteria for Direct-Indirect Behavior

A	B	C	D	E	F	G	H
I	NS	I	NS	I	I	I	I

Lesson Description

Social studies--Housing. Seminar discussion, 2 teachers, 11 students discussed ghetto dwellings at the turn of the century and now.

Non-verbal Categories

100% total group; 1% pupils moved and interacted; 4% pupils moved and did not interact.

The matrix for Teacher 10 is indirect. The 2 ratios are high, and the percentages of teacher and student talk indicate a high degree of indirectness.

All of the criteria are indirect except B and D, which are nonsignificant, (questioning and extended lecture). Examination of the Column 9 total reveals that most of the student-talk was self-initiated and sustained (Cell 9-9, Criterion H).

Non-verbal behavior, although of limited scope, is indirect.

Percent Matrix for Teacher 11
West Philadelphia Free School

	1	2	3	4	5	6	7	8	9	10
1										
2			2							
3			2	3	5				1	
4								12	2	1
5				7	17				2	
6						1				1
7										
8		1	3	2	2			2	4	
9		2	4	3	1				15	
10					1			1		
Column total		2	10	16	25	2	-	15	25	3

△= Indirect □= Direct

I/D = 1.04 S/T = .73
Teacher Talk= 57% Student talk= 40%

Criteria for Direct-Indirect Behavior

A	B	C	D	E	F	G	H
I	I	NS	NS	I	I	D	I

Lesson Description

4 small rooms were labeled "Fear, Sadness, Excitement, and Peace and Restfulness"; students were requested to pick a room and decorate it in whatever way they thought appropriate. Teacher interacted to aid in suggestions.

Non-verbal Categories

4% total group during explanation of task; 5% small groups chose material for rooms; 91% self-paced work; 60% teacher circulated; 60% of pupils moved and interacted; 97% selected materials, topics; 97% used media.

The matrix for Teacher 11 is indirect. The I/D ratio is indirect; the S/T ratio is moderate and reflects the non-verbal nature of the lesson.

The only criterion to achieve directness was G, rapid question-answer. Lecture and extended lecture were moderate and nonsignificant (in this lesson it would have been "teacher ideas" rather than lecture). There was extensive acceptance of student ideas, questioning, and extended student-initiated response as well as infrequent use of directions and criticism. Indirectness was reached on criteria A, B, H, E, F.

The non-verbal categories reflect a lesson which was very indirect.

Percent Matrix for Teacher 12
West Philadelphia Free School

	1	2	3	4	5	6	7	8	9	10
1										
2			1						2	
3			1	2	3				5	
4				1				2	10	1
5				2	5			1	2	
6										
7										
8				1					1	
9		3	9	6	1				32	2
10			1	1					2	2
Column total		3	12	14	9			3	53	5

△= Indirect □= Direct

I/D = 2.90 S/T = 1.43
Teacher Talk= 39% Student talk= 56%

Criteria for Direct-Indirect Behavior

A	B	C	D	E	F	G	H
I	I	I	NS	I	I	D	I

Lesson Description

Urban Health Class, 12 students and 1 teacher; seminar discussion of TB and emphysema from a previous film.

Non-verbal Categories

100% total group; 2% pupils moved and did not interact; 25 pos. cues (smiling, laughing, and encouraging students' discussion).

The matrix for Teacher 12 is extremely indirect, characterized by remarkably high I/D and S/T ratios with concomitantly high student-initiated talk. The criteria show that there was directness on Criterion G, vitiated somewhat by a low Column 8 Total. Extended lecture was non-significant; the Column 5 Total was low, achieving indirectness on Criterion C. The other criteria achieved indirectness with a large amount of acceptance of student ideas and questioning with little use of directions or criticism.

The high number of 25 positive non-verbal cues, smiling and encouraging student discussion, for example, is significant and is probably reflected in the 9-9 Cell which indicates that 32 percent of all talk was student initiated.

Percent Matrix for Teacher 13
Parkway School

	1	2	3	4	5	6	7	8	9	10
1										
2										
3			1	2	3				1	
4				2				2	8	
5				2	31				2	
6										
7										
8				1						
9			6	4	1				32	
10										
Column total			7	12	35			2	43	1

△ = Indirect □ = Direct

I/D = .54 S/T = .83
Teacher Talk= 54% Student talk=45%

Criteria for Direct-Indirect Behavior

A	B	C	D	E	F	G	H
NS	I	D	D	I	I	D	I

Lesson Description

Seminar discussion (9 students, 2 teachers) of Sir Walter Scott, romantic poets; topic: patriotism.

Non-verbal Categories

100% total group; 4% moved and did not interact; 1 negative cue to quiet class.

The matrix for Teacher 13 may be characterized as direct. The I/D ratio is indirect because it is above the .40 cut-off. Although no firm cut-offs have been developed for a S/T ratio which falls below 1.00, it is judged to be neither indirect nor direct. Given the small group and the nature of the lesson, the S/T ratio should be higher than .83. The direct nature of criteria C and D indicate extensive use of lecture and extended lecture which are inappropriate for a lesson which purports to be a discussion. This tendency is countered somewhat by the indirect character of Criterion H (Cell 9-9) indicating prolonged student-initiated responses. Criterion G, while direct, is spurious due to the small Column 8 Total; the indirectness of criteria E and F indicate that neither directions nor criticism were employed in this lesson.

The non-verbal categories provide insufficient evidence to make a judgment concerning whether or not the lesson is indirect or direct.

Percent Matrix for Teacher 14
Parkway School

	1	2	3	4	5	6	7	8	9	10
1										
2										
3			4	2	3				4	
4				2				2	4	1
5				2	9				2	
6									1	
7										
8				1				1	1	
9			8	2					45	
10										
Column total			14	9	13	1	1	4	57	1

△= Indirect □= Direct

I/D = 1.53 S/T = 1.60
Teacher Talk= 38% Student talk=67%

Criteria for Direct-Indirect Behavior

A	B	C	D	E	F	G	H
I	NS	I	NS	I	I	D	I

Lesson Description

Seminar discussion (3 students, 1 teacher) about strikes by city employees in a course entitled "Strikes and Riots." Half the discussion concerned the Molly Maguires.

Non-verbal Categories

100% total group; 2% pupils moved and interacted; 1% pupils moved and did not interact; 2% moved and disrupted; 2 positive and 1 negative cues.

The matrix for Teacher 14 is very indirect. Both the I/D and S/T ratios are large; the latter reflects the percentage of teacher and student talk.

Examination of the criteria reveals that questioning and extended lecture (Criteria B & D) were nonsignificant. All of the remaining criteria are indirect, with the exception of G. Criterion G is mitigated by the low Column 8 Total. The frequency of accepting student ideas (Column Total 3) is high as is the frequency of prolonged, student-initiated response (Cell 9-9).

Although student movement indicates indirectness, the non-verbal categories are of insufficient scope to support a judgment on the degree of directness or indirectness of the lesson.

Grand Matrices for the Analysis of
Teacher Behavior During the Practicum

In this section, group profiles will be constructed for the experimental students' teaching behavior on the basis of the indirect-direct variables used in the previous sections in the analysis of individual teacher behavior. Group profile data are presented in the order given below.

1. Percent matrices for all of the experimental students at Sayre, the Free School, and Parkway;

2. Summary data on the I/D and S/T ratios, Table 5;

3. Summary data on Criteria A through H by teacher and school, Table 6;

4. Grand means for Flanders' TRR, TQR, and PIR ratios, Table 7;

5. Mean percentages for the non-verbal categories, Table 8; and the

6. Grand matrix on the Flanders' categories and other indices of indirect-direct behavior, Table 9.

Percent Matrix
Sayre Junior High School

	1	2	3	4	5	6	7	8	9	10
1										
2									1	
3			1	1	1			1	1	
4				2				△ 5	4	1
5				2	7	1	1	2	4	1
6						2		2	2	
7							2	1	1	
8			2	2	3	2	1	12	1	
9		1	3	3	3	1	1		△ 14	3
10				2	1	1			2	3
Column total		1	△ 6	△ 11	△ 14	7	△ 4	22	27	8

△= Indirect □= Direct

I/D = .80 S/T = 1.13
Teacher Talk= 43% Student talk= 49%

Criteria for Direct-Indirect Behavior

A	B	C	D	E	F	G	H
I	I	I	NS	NS	I	I	I

TRR = .37 TQR = .44 PIR = .54

Percent Matrix
West Philadelphia Free School

	1	2	3	4	5	6	7	8	9	10
1										
2			1						1	
3			1	2	2				3	
4				2				4	7	1
5				3	7	1			1	
6						2		1	1	
7										
8			1	2	1	1		10	1	
9		1	6	4	1	1			22	1
10				1					1	1
Column total		2	10	14	12	5	1	16	37	3

△= Indirect □= Direct

I/D = 1.56 S/T = 1.26
Teacher Talk= 44% Student talk= 53%

Criteria for Direct-Indirect Behavior

A	B	C	D	E	F	G	H
I	I	I	NS	NS	I	I	I

TRR = .69 TQR = .53 PIR = .70

Percent Matrix
Parkway School

	1	2	3	4	5	6	7	8	9	10
1										
2										
3			2	2	3				2	
4				2				3	6	
5				2	17				2	
6						1		1	1	
7										
8			1	1	1			1	1	
9		1	7	3	1				34	1
10									1	
Column total		1	9	10	23	2		6	47	2

△ = Indirect □ = Direct

I/D = 1.15 S/T = 1.38
Teacher Talk= 45% Student talk= 53%

Criteria for Direct-Indirect Behavior

A	B	C	D	E	F	G	H
I	NS	I	NS	I	I	NS	I

TRR = .78 TQR = .32 PIR = .89

The summative matrices, by school, are all indirect in nature, though inspection reveals some differences in teacher behavior among the schools. As Table 5 indicates, the Free School had the highest I/D ratio (1.56), followed by Parkway (1.15) and Sayre (.80). In terms of the S/T ratio, however, (and the concommitant percentages of teacher and student talk), the Parkway School was the highest (1.38) followed by the Free School (1.26) and Sayre (1.13).

Examination of the criteria measures listed on Table 6 also reveals some differences among schools although it is noteworthy that none of the criteria was direct for any school. Criterion A, acceptance of student ideas, and Criterion F, use of criticism, were indirect for both the Free School and Parkway while not significant in either direction for Sayre. Criteria B and G, on the other hand, concerning use of questioning and use of rapid question and answer respectively, were indirect for Sayre and the Free School and nonsignificant for Parkway. Criterion C, use of lecture, and Criterion H, prolonged student-initiated response, were indirect for all schools. The teachers at Sayre were the only ones to achieve indirectness on Criterion D, use of extended lecture. The other schools were insignificant on the same criteria. This fact is interesting in that Sayre is a traditional school. In their use of directions (Criterion E), Sayre and the Free School were not significant in any direction while Parkway was indirect.

The schools also differed in their Teacher Response Ratio, Teacher Question Ratio, and Pupil Interaction Ratio (Table 7). For the TRR ratio both Parkway and the Free School (.78 and .69 respectively) were substantially above the Flanders norm of .42 while Sayre (.37) was slightly below. For the TQR ratio, however, all schools were above the norm (.26), though here the Free School was the highest (.53) followed by Sayre (.44) and Parkway (.32). The PIR ratios of all the schools is also higher than the Flanders norm (.37), but in this case Parkway heads the list (.89) followed by the Free School (.70) and Sayre (.54).

Table 5

Summary of the I/D and S/T Ratios and Percentage of Student-Teacher Talk

Teacher	I/D	S/T	Teacher Talk	Student Talk
1	1.30	1.90	31%	57%
2	.97	.84	51%	43%
3	.12	1.02	46%	48%
4	.52	.58	62%	37%
5	2.00	2.52	28%	68%
6	1.50	1.57	37%	58%
7	.70	1.14	44%	50%
8	2.23	.78	56%	43%
9	1.22	1.50	39%	60%
10	1.31	1.69	36%	62%
11	1.04	.73	57%	40%
12	2.90	1.43	39%	56%
13	.54	.83	54%	45%
14	1.53	1.60	38%	61%
Grand Mean	1.12	1.21	44%	53%
I/D and S/T Means and Percentage of Talk by School				
Sayre	.80	1.13	43%	49%
Parkway	1.15	1.38	45%	53%
Free School	1.56	1.26	44%	53%

The data in Table 5 reflect indirect teacher behavior. The grand means for the I/D and S/T ratios are greater than 1.00; the percentage of student talk exceeds that of teacher talk. Nine of the 14 students had ratios greater than 1.00.

Particularly noteworthy is the .80 I/D ratio for the students in a traditional urban school--well above the .40 cut-off for direct behavior.

Table 6

Summary of Indirect-Direct Criteria by Teacher and School

Teacher	Indirect-Direct Criteria							
	A	B	C	D	E	F	G	H
1	NS	I	I	NS	I	NS	I	I
2	I	I	I	I	I	NS	NS	I
3	D	D	I	NS	D	D	I	I
4	I	NS	D	NS	D	I	NS	I
5	NS	I	I	NS	I	I	D	I
6	NS	I	I	I	NS	NS	I	NS
7	NS	I	I	I	D	NS	I	NS
8	I	I	I	NS	I	I	D	I
9	I	NS	I	NS	I	I	D	I
10	I	NS	I	NS	I	I	I	I
11	I	I	NS	NS	I	I	D	I
12	I	I	I	NS	I	I	D	I
13	NS	I	D	D	I	I	D	I
14	I	NS	I	NS	I	I	D	I
Dominant Behavior by Criteria	I	I	I	NS	I	I	I	I
	Dominant Behavior by School							
Sayre	NS	I	I	I	NS	NS	I	I
Parkway	I	NS	I	NS	I	I	NS	I
Free School	I	I	I	NS	NS	I	I	I

Table 6 reflects indirect behavior on criteria A, B. C, E, F, and H which is not surprising because about 75 percent of the students individually achieved indirectness on these criteria.

Criterion G, indirect on the mean computed across students, requires explanation because 7 students were direct and 5 indirect on the individual analysis. Analysis reveals that of the 7 students judged to be direct, only 1, Teacher 11, had a large number of responses in Column 8. The indirect students, however, frequently had large Column 8 totals. In the mean computed across individual students, the indirect students "outweighed" the direct students in Column 8 totals, thus meeting the criterion of indirectness for G.

Table 7

Flanders' Norms for Three Ratios by
Grand Mean and School

Type of Matrix	TRR*	TQR*	PIR*
	Flanders' Norms		
	.42	.26	.34
Grand Mean	.67	.45	.74
Sayre	.37	.44	.54
Parkway	.78	.32	.89
Free School	.69	.53	.70

*TRR - Teacher Response Ratio

TQR = Teacher Question Ratio

PIR = Pupil Initiation Ratio

The grand means for the 3 ratios are well above the norms for indirectness. The TRR shows a large number of indirect motivating statements from the teachers, Categories 1, 2, and 3, relative to the amount of controlling statements, Categories 6 and 7. The TQR reflects a large amount of questioning relative to lecturing. The PIR shows that the student talk was predominantly student initiated and not teacher directed.

Table 8

Mean Percentages by Teacher and School for the Non-Verbal Category System

Teacher	Group Organization T.Grp. 1	S.Grp. 2	Ind. 3	Movement 1	2	3	4	Self-Direction 1	2	Use of Media	Non-Verbal Cues Pos.	Neg.
1	100										1	6
2	100									25		6
3		100		50	3			75	75			12
4		100		75	10	8	1	100				
5		100			2	1					1	
6		100		50	9	10	2	50		100	4	
7		100		17	1	3		28		100	5	1
8		100			17	1				100	3	
9		100			2	1				100	4	
10		100			1	4						
11			91	60	60			97	97	97		
12		100				2					25	
13		100				4						1
14		100			2	1	2				2	1
Mean	14.29	79.21	6.50	17	7.5	2.5	.5	25	12	29	45	27*
Sayre	67	33		16	1	3		25	25	8	1	24
Parkway		100		19	3	3	1	25			3	2
Free School		87	13	18	13		3.03	25	19	71	4	1

*Total frequency--not mean percentage.

Table 9

Grand Matrix for all Students on the Flanders' Categories and Other Indices Used to Assess Teacher Behavior

	1	2	3	4	5	6	7	8	9	10
1										
2										
3			1	2	2				2	
4				2				△ 3	6	1
5				2	10	1		1	2	
6						1		1	1	
7										
8			1	2	1	1		8	1	
9		1	6	4	1	1			△ 25	1
10				1					1	1
Column total		1	△ 9	△ 13	△ 16	△ 4	△ 1	14	39	3

△ = Indirect □ = Direct

I/D = 1.12 S/T = 1.21

Teacher Talk= 44% Student talk= 53%

Criteria for Direct-Indirect Behavior

A	B	C	D	E	F	G	H
I	I	I	NS	I	I	I	I

TRR = .67 TQR = .45 PIR = .74

The grand matrix, Table 9, is indirect. Both ratios and the student talk percentage are relatively high. The criteria measures are all indirect with the exception of D which was nonsignificant. There was a high degree of

acceptance of student ideas, a large amount of questioning, infrequent lecture which was not extended, infrequent directions, little criticism, little rapid question-answer behavior relative to the amount of student response in Column 8, and an abundance of extended student-initiated response. The 3 ratios, TRR, TQR, and PIR, are well above Flanders' norms.

Summary Review of Questionnaire Data Related to the Practicum

Since Objective A, testing and improving professional skills in a real setting, is the primary objective of the practicum experience, and the only objective in this section for which behavioral data exist, the remaining questionnaire data will be presented only if statistically significant differences favor either the comparison or the experimental group or if qualitative differences are judged to exist in the questionnaire data. (All of the data which have been analyzed are available for examination.)

Question 4 of the Self-Growth Questionnaire asked the students to rate how, as a result of their programs, certain abilities and characteristics had been affected. The ratings covered 8 areas and were done on a 1 to 5 scale with 5 representing the largest amount of increase attributed to the program. The result for the comparison and experimental program students was compared via a simple F test. The means for both groups (with the comparison group partitioned) and the significance test data are reported below. All df's = 1,27.

Characteristic	Intern	El.Ed.	Combined Comp. Group	Exp. Prog.	F	p
A. ability to accept and act upon criticism of your behavior as a teacher	2.7	2.0	2.3	4.3	26.1	.001
B. openness to suggestion about new ideas of teaching	3.9	3.0	3.5	4.8	9.5	.01

	Characteristic	Intern	El. Ed.	Combined Comp. Group	Exp. Prog.	F	p
C.	self-awareness of your own inadequacies as a teacher	3.8	2.4	3.1	4.2	5.1	< .05
D.	ability to use inductive method	2.7	2.9	2.8	3.5	5.1	< .05
E.	commitment to teaching	3.0	3.1	3.1	3.8	2.6	NS
F.	respect for student	3.3	3.3	3.3	4.7	12.9	< .01
G.	willingness to experiment	3.0	3.4	3.2	4.7	14.4	< .001
H.	ability to cope with anxiety-ridden situation	3.3	3.8	3.5	3.7	.48	NS

It can be seen that the ratings for the experimental group are significant in 6 of the 8 areas. The 2 areas of no significant difference were commitment to teaching and the ability to cope with anxiety-ridden situations. The lowest rating by the experimental group, ability to use the inductive method, was 3.5 (although the observed teaching behavior presented in the last section would warrant a higher rating). The other 5 major areas were rated high with means over 4.0.

One can question the value of a subjective estimate of "commitment to teaching." In retrospect it does not seem to have been worth asking.

Questions 11 and 12 in the 504 Questionnaire tried to assess the impact of classroom experience in urban schools on (a) the type of school in which the students wanted to teach on a full-time basis, and (b) if this desire had changed in the course of the previous program. Comparable data were secured for both the experimental and comparison groups.

In the experimental group 12 wanted experimental urban school placements; 3 wanted traditional urban; and 2 were ambivalent on the type of school, but wanted to teach in an urban setting. Twelve students said that their desire for the kind of school desired had changed during the practicum, 3 said it had not changed, and 2 did not respond.

In the comparison group, 5 of the interns preferred an urban school of some type (junior or senior high or White "lower class"). Two didn't respond. In the elementary group, 2 students who were at the Learning Center wanted either a Learning Center or nongraded urban placement; 3 wanted either suburban or private school placements; 1 was undecided, 1 did not respond.

The 2 students who wanted a suburban placement had desired this from the beginning of the program; 1 changed to desiring a private school placement after experiencing student teaching in an urban classroom.

In the comparison group, 4 students said that their desire for a particular placement had changed since they began their program; 4 stated there was no change; and 5 did not respond.

These data reveal the impact of the experimental placements on the experimental students: 12 changed to desiring an experimental placement while no student changed his desire to teach in an urban school because of his practicum experience.

Most of the interns responding wanted urban school placements, none mentioned experimental-type schools; the elementary group was the only group in which some students expressed a preference for a non-urban assignment. Two students, perhaps reflecting experimental-type placements in the Learning Centers, cited preference for placement in either a Learning Center or a nongraded school.

The final summary of questionnaire data is given below.

Question 7 of the evaluation questionnaire (corresponding to question 6 on the comparison questionnaire) reads as follows:

"How did this course in general affect your motivation to become an excellent teacher?"

Students were asked to respond in 1 of 3 categories: "increased", "no effect", or "decreased."

Analysis of the data reveals some differences between the 2 total groups.

In the experimental group, 59 percent indicated that their motivation had increased, while 31 percent of the comparison group responded in this category. Six percent of the experimental group indicated that the course had decreased their motivation as compared to 31 percent of the comparison group. Thirty

percent of the experimental group said that the course did not affect their motivation, while 31 percent of the comparison group answered in a similar manner. An additional 6 percent of the experimental group (comprised of 1 student who failed to answer this entire page of the questionnaire) did not respond, while 8 percent (also 1 student) of the comparison group did not respond.

Over twice as many experimental students (10) reported an increase in their motivation to become an excellent teacher as did students in the comparison group (4). A decrease in motivation was reported by 31 percent of the comparison group compared with 6 percent of the experimental group.

Although these differences were not statistically significant, the impact on motivation, as judged by the absolute numbers of students reporting either an increase or a decrease, indicate that changes within the experimental group were in the desired direction.

Conclusion

On the basis of the analysis of teaching behavior in a real setting which has been presented, and on the basis of the analysis of the questionnaire data related to motivation to become an excellent teacher, the willingness to act on criticism of one's teaching behavior, openness to new ideas, and willingness to experiment, it may be reasonably concluded that Objective A was met because evidence was presented which indicated that

the indirect teaching behavior developed in microteaching carried over to the practicum and was apparently improved.

Since Objectives B, D, and E are secondary objectives, data on these objectives will not be presented. Analysis of the data available, however, indicates that Objectives B and D were met; E, related to developing a workable plan for the first year of full-time teaching, was not met.

Objective C, to increase motivation to become an excellent teacher and to deepen one's concept of teaching, was met as the data presented in the previous section indicate.

Chapter V

Evaluation of 505 According to its Stated Objectives

Analysis of the data pertaining to the first three components of the Experimental Program indicated that the students developed an "indirect" teaching style. Education 505 is an attempt to further develop teaching skills by working with excellent teachers in an established experimental school.

Education 505 is a six-week course which is given during the second summer of the program. It is taught in cooperation with the Pennsylvania Advancement School (PAS). PAS, funded by the Philadelphia School Board, is an experimental school which works with underachieving junior high school pupils by developing new curricula and innovative styles of teaching. PAS functions as a development and diffusion center for the Philadelphia system.

Students from the Experimental Program were placed at PAS as members of interdisciplinary teams under the direct supervision of an experienced lead teacher who would serve as the primary source for corrective feedback.

In addition to their daily teaching assignments the Experimental Students were given the opportunity to attend several workshops given by PAS staff. These workshops included such topics as the teaching of reading, community mental health, and new social studies materials.

To assess the effectiveness of 505 a questionnaire was administered by the PAS staff to the experimental group. Most of the questions pertained to specific operations at PAS and are not included here. Three questions, however, were specifically designed for the experimental students. These

questions are given below.

1. "To what extent, if any, did the PAS experience increase your skill in, or knowledge of, teaching?"
2. "How would you say the PAS Summer Program compared with, or complemented, your Spring Practicum Experience?"

3.a. "What do you think were the major strengths of the PAS Summer Program?"

3.b. "What do you think were the major weaknesses of the PAS Summer Program?"

Responses to these questions were analyzed by content analysis. The results of the content analysis are given below.

Content Analysis of the 505 Questionnaire

N = 13

1. "To what extent, if any, did the PAS experience increase your skill in, or knowledge of, teaching?"

Categories	f
Increased both knowledge and skills	13

Comments

This experience helped me to better understand a realistic teaching-learning situation with urban junior high school students	9
I gained a lot from the feedback provided by my lead-teacher's critiques	5
I learned to use new curriculum materials	5

Comments continued	f
I learned that all learning activities with students must be tangible, concrete, and include an activity in which the students can become involved.	3
This experience helped me to vary my teaching skills.	2
I increased my sensitivity to student feedback.	1
I clarified for myself what I want to teach	1
This experience increased my creativity	1

2. "How would you say the PAS Summer Program compared with, or complemented, your Spring Practicum Experience?"

Categories	f
Complemented (a continuation of)	5
Contrasted (clearly different from)	9

Comments

Complemented

This experience gave a balance to several of the things I learned during my Spring Practicum	2
This was a continuation of my Parkway Experience	1
I continued my practicum teaching experience in planning and teaching lessons	1

Contrasted	f
PAS differed radically from Parkway. Both increased my development, but PAS brought me back to the reality of a structured situation	2
I could do a lot of things at PAS that I couldn't do during my Spring Practicum	2
PAS was much better structured. The lead-teacher was interested. I got no help during my Spring Practicum	1
My duties at PAS differed from those at the Learning Center	1
This experience gave me, for the first time, the chance to teach alone	2
This experience differed radically from the Spring Practicum in that I was exposed to a different age group	2
Teaching at PAS was more useful than teaching at Parkway because of the emphasis on teaching techniques and running a class	1

3.a. "What do you think were the major strengths of the PAS Summer Program?"

Comments	f
Working with a lead-teacher and thus getting feedback from an experienced educator	9
Becoming acquainted with new curricula	5

Comments continued	f
The workshops, especially Mental Health and Media	5
The diversity of available (Media) supplies	4
Interesting and approachable people	3
Team teaching	2
Diverse student body	1
Realistic training in classroom technique and training	1
The freedom that I was allowed	1

3.b. What do you think were the major weaknesses of the PAS Summer Program?"

Comments	f
The time spent at PAS was too short	5
We had no chance to observe what other teams within the school were doing	4
Lack of communication with total PAS staff	3
Too few workshops	2
PAS uncertain about what it was training teachers for	2
Not enough time to plan lessons	2
Too many unnecessary meetings	1
Too much administrative interference with classroom activities	1
No close contact with parents	1

Comments continued	f
Creating a false expectation in summer pupils by showing a slide-tape presentation of Fall experience, implying that the summer experience is similar	2
Staff aloof and uninterested except for team leaders	1
No University observers	1
PAS experience came too close on the heels of a full year of intensive training	1
Artificial teaching situation	1

Note: Because all of the team leaders at PAS did not hand out the questionnaire, 4 students could not participate in the evaluation.

Objective 1 for course 505 reads: "To be exposed to models of good teaching so that the skills learned in 503 and 504 may be further impressed as perceived by the experimental students."

The data of the content analysis indicate that the objective was achieved. All of the 13 students who completed the questionnaire responded that 505 both increased their knowledge of teaching and teaching skills. In addition, under the strengths of the course, 9 students or 61 percent, indicated that the opportunity to receive feedback from an experienced educator (lead teacher) was the major benefit of 505. Furthermore, 9 students said that their understanding of a teaching-learning situation had deepened as a result of the experiences provided in 505.

Since this questionnaire engendered only fragmentary comments they will not be reported here.

Objective 2 reads: "To be exposed to, and become familiar with, new curriculum materials." The data reveals no clear pattern on which to evaluate this objective.

In discussing their reasons for believing that the PAS experience had increased their skill and knowledge of teaching, 5 students specifically cited familiarity with new curriculum materials. Under the lists of strengths and weaknesses, 5 students again cited familiarity with new curriculum materials as a strength, while 4 students cited the diversity of available supplies as an additional strength.

Because these categories are not mutually exclusive it is possible that the same 5 students could account for all of the responses which mention exposure to new curricula. Because of this uncertainty, no conclusions regarding the attainment of Objective 2 can be made.

Appendices

1. 502 Objectives
2. 502 Questionnaire
3. Content Analysis of 502 Questionnaire
4. Dr. Cogan's Report
5. Mr. Herman Wrice's letter
6. Pre-and-Post Attitudinal Survey for 502
7. Teaching Tasks Used in Microteaching
8. Taxonomy of Teaching Tactics Used in Microteaching
9. Microteaching Model
10. Report of the Group Dynamics Leader
11. Feedback Forms Used in Microteaching
12. 503 Objectives
13. 504 Questionnaire for Experimental and Comparison Groups
14. 503 Questionnaire on which Content Analysis is Based
15. Categories for Analyzing Nonverbal Classroom Behavior
16. Self-Growth Questionnaire for Experimental and Comparison Groups

Appendix 1

Course Objectives for Ed. 502

Community Orientation and Study

A. To increase understanding of the process of social change in an urban neighborhood by working within a black community organization.

B. To observe and understand more adequately some of the key elements of the inner city social environment such as recreational patterns and facilities, health services, housing, employment patterns, and job training programs; to learn about possible solutions to these problems and the obstacles which may impede the proposed solutions.

C. To be exposed to the values and programs of black and white community and religious leaders who are working for social change in education, housing, health services, and job training.

D. To learn about one's self through the shared perceptions of others sharing a new experience as a minority group in generally unfamiliar social terrain.

E. To learn to share authority and responsibility for one's learning through more nearly co-equal status between teacher and student in which curriculum planning, administrative problems, and evaluation procedures are worked out with the participation of all persons affected.

F. To learn more about the home and neighborhood backgrounds of school age students so that the school behaviors may be better understood.

Appendix 2

502 Questionnaire

1. Did this course help you to increase your knowledge of the community? If so, how?
2. Did this course help you to increase your knowledge of
   a. self?
   b. others?
3. Did this course increase your knowledge of social change in the urban community?
4. Were you aware of the effects of working with YGS, and a complex, black community?
5. What were the strengths and weaknesses of this course?

Appendix 3

Content Analysis for Ed. 502 (pp. 23-28)

In this initial mimeographed report, Appendix 3 will not be included because the content analysis is given in Chapter II.

Appendix 4

Since Dr. Cogan's report on GSE teacher preparation programs is lengthy, it will not be included in this initial mimeographed report.

Appendix 5

THE YOUNG GREAT SOCIETY
4040 LOCUST STREET
PHILADELPHIA, PA. 19104

HERMAN C. WRICE
PRESIDENT

EV 7-3670
EV 7-2662

January 28, 1970

Mr. Gustave G. Amsterdam
President
The Albert M. Greenfield Foundation
Bankers Securities Building
Philadelphia, Pennsylvania 19107

Dear Mr. Amsterdam:

I am writing in endorsement of the accompanying proposal prepared by Dr. Richard A. Gibboney, of the Graduate School of Education of the University of Pennsylvania.

During the winter of 1967-1968 Dick initially approached me with the idea of the Experimental Program in Secondary Education, and I have been delighted to follow its progress since -- both directly, and through the reports of my personnel assigned to assist in the program.

For over five years I have had the opportunity to observe a wide variety of innovative programs in teaching and teaching to teach while involved as a parent, community leader, and consultant to the School District of Philadelphia and the University of Pennsylvania. On this basis I think that Dr. Gibboney has correctly emphasized the unique character of the Experimental Program. There are programs involving microteaching, programs involving work with community groups, and programs involving assignment to experimental school units; however, Gibboney has succeeded in combining all three units into one whole.

Mr. Gustave G. Amsterdam

As a personal observation, I have met with sad frequency people of the highest motivation --- in teaching and other areas of the urban crisis --- who are being sent out with tools so pitifully inadequate that good intentions are doomed to break on hard realities. By contrast, in the case under review, I have seen Dick and his team working with two classes of the Experimental Program by now, and I like what I see: their grasp of and approach to realities, far from blunting idealism and imagination, through attention to pragmatic necessities and nuts bolts responses are producing the kind of people who will "make a difference" in teaching as Neal Gross has put it.

Despite our close collaboration this is not a Young Great Society program. Further, the assistance our various operations receive in donated student labor is probably more than offset by time donated for orientation, briefings, and teaching by community and professional staff while the summer sessions are in progress. I would emphasize, then, that my endorsement of this project rests entirely on the shared interest in the teachers who will make a difference for our children.

I have the confidence in Dick and students of the caliber he has attracted (however different in race or family background) that with the period of further funding requested they can move the program from the "experimental" to an established and recognized approach to teacher training.

Sincerely,

Herman Wrice

Herman C. Wrice
President

YGS APC
THE YOUNG GREAT SOCIETY ARCHITECTURE AND PLANNING CENTER
COMMUNITY PLANNING DESIGN AND ARCHITECTURE
3420 BRANDYWINE STREET • PHILADELPHIA, PENNSYLVANIA 19104 • EVERGREEN 7-4700

27 August, 1969

Dr. Neal Gross, Dean
University of Pennsylvania
Graduate School of Education
Philadelphia, Pennsylvania, 19104

Dear Neal:

I've been meaning to tell you how impressed I was with the caliber of the students in Dr. Richard Gibboney's summer program this year. They must have been the result of a careful selection process and I know that they have been exposed to many different kinds of learning situations while here.

The branch office heads have sent in good reports--Don Bruce found Mitch Bernstein and Clarence Hoover especially eager to work with the gang members and learn with them in the morning sessions. Don Ryan said that Marvin, Cynthia, and Bob were an invaluable aid on the week-long camping trip and several students were a great help with the daily trips to Gimbel gym and weekly trips to the shore.

The YGS administrative staff at 4040 Locust St. and the Architecture and Planning Center have told me that they greatly needed the effecient help of Ted, Jolly, and Bob, while the Medical Center finally has statistical records thanks to Betty and Nancy. Marge proved an indispensable replacement for a full-time secretary and went on to do needed photographic and brochure-writing work. The Halfway House staff were pleased with the maturity of Mike and Marvin.

The students did not limit themselves to strictly YGS activities but worked with other organizations important in the community. Bob London has organized new playstreets in Mantua, and several of the girls on their own initiative helped the city staff on playstreets. Many donated time, transportation, and responsible leadership at the MCP picnic at French creek. There were plenty of occasions during the summer when I would see Dolores, Marge, and Mike on the front doorstep of the Spring Garden St. house with the children of the block, playing with them and trying to teach them to read.

Many were teacher-aides at McMichael School, learning to work with some of the more traditional teachers they will have to work with when they join the system. And Maxine, Elaine, Marge, Mike, Clarence, and others learned how to be competent observers at a combined teaching-therapy program run by the West Philadelphia Mental Health Consortium under Mr. Walt Schumann, director of Innovative Programs.

Mitch's research for the Middle School Study was also greatly appreciated.

There were seminars, sensitivity sessions, movies about education, speakers ranging from a high school teacher to Gail Donovan, and lots of discussions and active involvement for all.

If I seemed hard on the students, I was only using reverse psychology, trying to make them angry enough to prove me wrong. Although they may have thought that I sincerely believed their efforts small and ineffective, I would like to take this opportunity to tell you now and Dr. Gibboney and his students later that I appreciate their work and am impressed with them both as a group of future urban teachers and as individuals with initiative. They did a bang-up job.

In fact, I would appreciate an opportunity to discuss this with you and the possibility of establishing fall and spring semester courses of the same nature. The summer program resulted in a lot of learning on both sides, and by continuing it and programs like it through the year, I am sure that both of our organizations and eventually the school system as a whole will benefit. The ultimate goal is social and educational progress, and with students and programs such as these, the goal may begin to be reached.

I look forward to a meeting with you within the month to discuss these things.

Sincerely yours,

Herman C. Wrice, President
The Young Great Society

Appendix 6

Pre-and-Post-Attitudinal Survey for 502

502--Pre and Post--June 1970

1. How would you rate your degree of knowledge of the areas of social change in an urban community?

   0 1 2 3 4 5

2. Please list briefly what you consider the essential elements of the social change process.

3. (post only) Has working with YGS during the past six weeks increased and/or changed your perceptions of urban social change?

   Increased yes no

   0 1 2 3 4 5

   Changed yes no

   0 1 2 3 4 5

   In what respect(s)?

4. How would you rate the degree of your understanding of the following?

   a. inner-city recreational programs and facilities? 0 1 2 3 4 5
      Briefly state how you define the problem.

   b. health services 0 1 2 3 4 5
      Briefly state how you define the problem.

   c. employment patterns 0 1 2 3 4 5
      Briefly state how you define the problem.

   d. job training programs 0 1 2 3 4 5
      Briefly state how you define the problem.

5. (pre only) On what are you basing your opinions (Direct experience, books and articles read, television shows, etc.?)

6. What do you feel are the basic obstacles impeding the solution of these problems in the urban community?

7. (post only) Has working with YGS given you any ideas on how these obstacles can be overcome?--If so, briefly state them.

8. (post only) Has your concept of yourself changed as a result of this experience?

yes no no change 0 1 2 3 4 5 extensive

a. How?

b. Why?

Please read through each of the following statements carefully and then check the one which most nearly approximates your feelings about what you consider to be an ideal learning situation.

a. The teacher, by virtue of his status, knows more about the subject than the students. Therefore, he should determine what is significant and what is not, and should be responsible for all that takes place (i.e., planning, imparting information, evaluating the students, etc.) in the classroom.

b. Students are the only ones capable of judging what they need to learn and whether, in fact, they have learned it. Therefore, the students should be responsible for directing and evaluating their learning with the teacher serving only as a resource person, to act when called upon.

c. It is true that the teacher does know more, but it is likewise true that students are the best judges of what and how much they have learned. Therefore, the best learning situation is one in which authority and responsibility are shared between teacher and student.

d. Learning is so individual and tentative that one can make no judgment regarding teacher-student roles.

e. Emphasis should be on learning, not teaching. Therefore, students should have the greater power to influence decisions regarding the content and methods which may influence learning.

f. Since a student cannot exercise options with regard to content and methods of which they are ignorant, the teacher should have the decisive voice.

10. List what you feel are the biggest obstacles (if any) impeding mutual understanding between Whites and Blacks.

11. How do you feel these obstacles can be overcome?

12. (post only) Has this experience helped to overcome them? How?

13. When thrust into a situation in which you are forced to interact with Black people, do you feel

insecure 1 2 3 4 5 secure

Why?

14. Prior to this program, have you had a sustained experience (regular contact over a period of one month or more) with Blacks?

a. If yes, please describe. (PRE ONLY)

15. How would you rate the degree of your knowledge of the home background of black, inner-city school age children?

minimal 0 1 2 3 4 5 extensive

a. Briefly state your conception of this background.

16. How would you rate the degree of your knowledge of the neighborhood background of black, inner-city school age children?

minimal 0 1 2 3 4 5 extensive

a. Briefly state your conception of this background.

Appendix 7

Teaching Tasks for 503

Introducing the Subject

Relating a Lesson to Individual Needs of Students and/or a Relevant Social Problem

Arousing a Desire to Learn

Teaching for an Independently Motivated Student Action

Teaching Basic Concepts

Teaching Problem Definition Skills

Teaching Analytical Skills

Teaching Synthetic Skills

Teaching Cross-Subject Synthetic Skills

Teaching for Positive Attitudes Toward X

Teaching to Mirror the Student Himself (others)

Teaching X in a Manner true to a Given Method

Teaching for Transfer A to B

Appendix 8

UNIVERSITY OF PENNSYLVANIA
GRADUATE SCHOOL OF EDUCATION

Experimental Program in Urban Education

Ed. 503--Microteaching--Richard A. Gibboney

Preliminary Taxonomy of Teaching Tactics

September 17, 1969

Note: Materials or instruments developed for use by the Program for curriculum development purposes cannot be quoted or reproduced without permission.

This preliminary taxonomy was developed to make more explicit some of the possible tactics teachers may use to achieve particular lesson or unit objectives. It is organized around the concept of Direct and Indirect teacher-student behaviors developed in the research of Ned Flanders.

Direct tactics are those that narrow or restrict pupil-teacher behavior; Indirect tactics are those which broaden pupil-teacher behaviors, many of which may not be fully known until a particular teaching sequence is concluded.

A given tactic may be modified by pairing it with another in the opposite column. The lecture, for example, is interpreted as being very direct teacher behavior; however, by pairing it with student-derived problems to achieve an objective, the movement of the two tactics is toward the center of the Direct-Indirect Continuum. Pairings may also be made within the Direct or the Indirect columns.

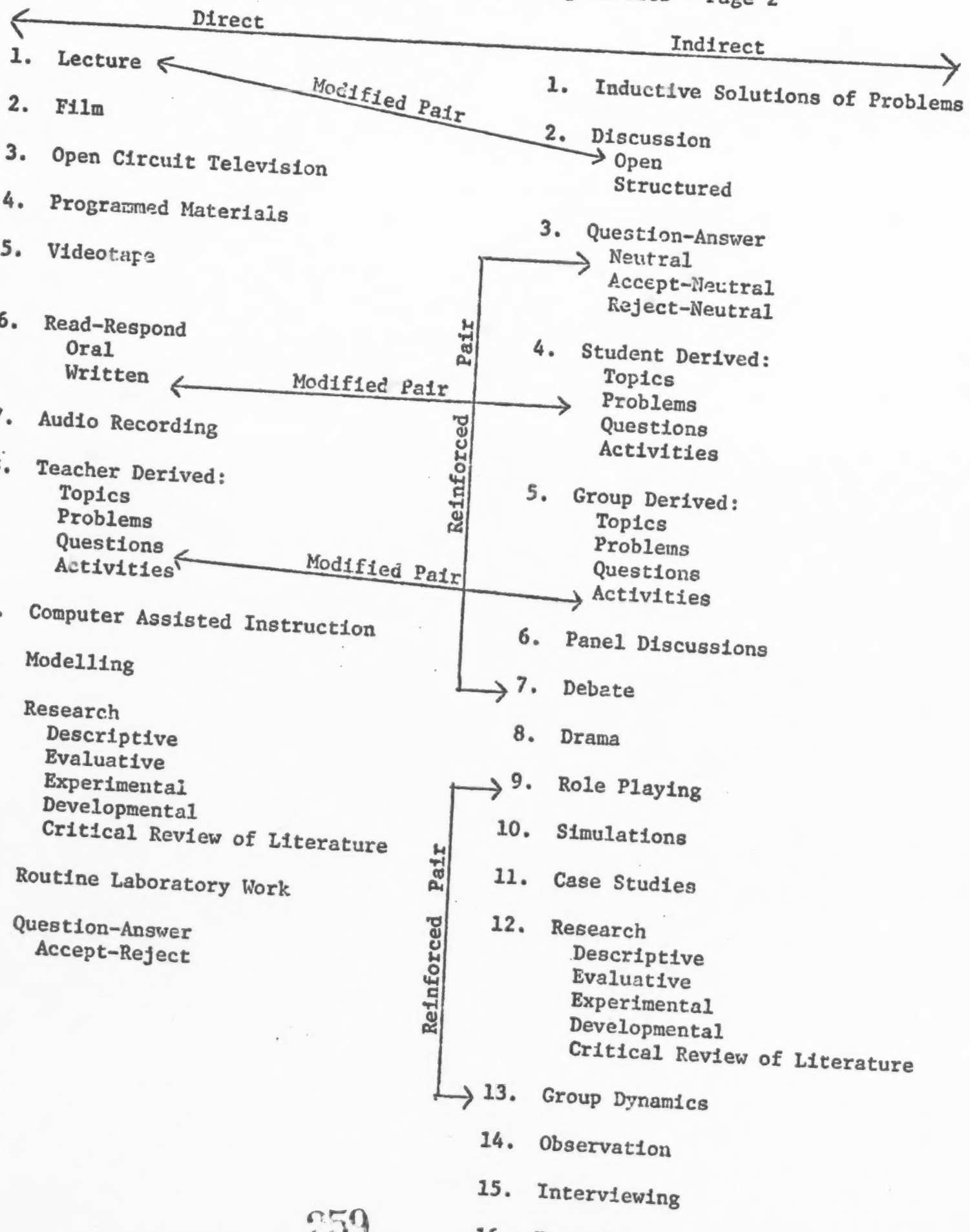
UNIVERSITY OF PENNSYLVANIA
GRADUATE SCHOOL OF EDUCATION

EXPERIMENTAL PROGRAM IN URBAN EDUCATION

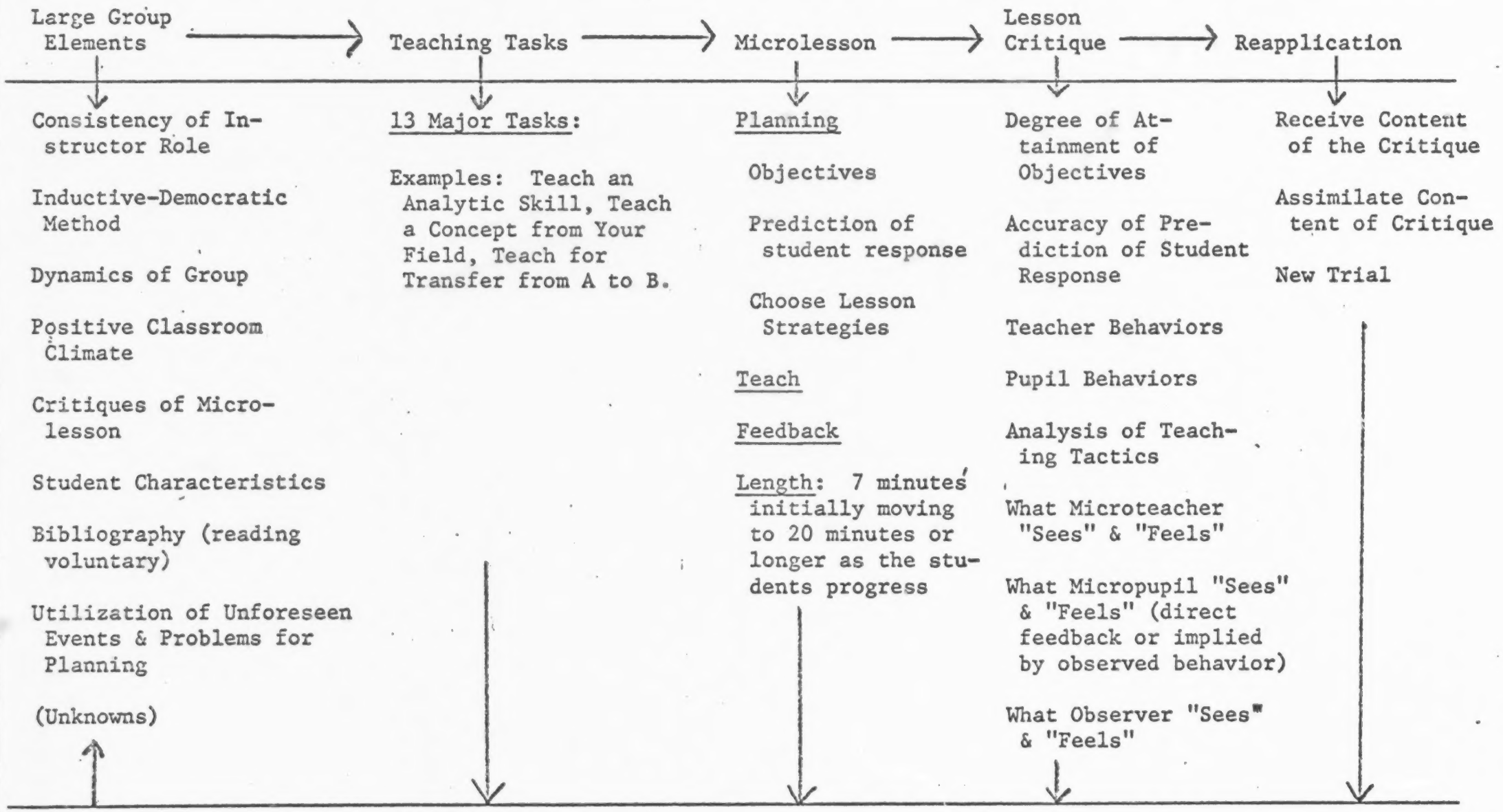
Ed. 503 - Microteaching, Richard A. Gibboney

September 19, 1969

Preliminary Taxonomy of Teaching Tactics - Page 2



The Instructional Model Used in Microteaching: Relationship of Primary Elements


Large Group Elements
Teaching Tasks
Microlesson
Lesson Critique
Reapplication
Consistency of Instructor Role
Inductive-Democratic Method
Dynamics of Group
Positive Classroom Climate
Critiques of Microlesson
Student Characteristics
Bibliography (reading voluntary)
Utilization of Unforeseen Events & Problems for Planning
(Unknowns)
13 Major Tasks:
Examples: Teach an Analytic Skill, Teach a Concept from Your Field, Teach for Transfer from A to B.
Planning
Objectives
Prediction of student response
Choose Lesson Strategies
Teach
Feedback
Length: 7 minutes initially moving to 20 minutes or longer as the students progress
Degree of Attainment of Objectives
Accuracy of Prediction of Student Response
Teacher Behaviors
Pupil Behaviors
Analysis of Teaching Tactics
What Microteacher "Sees" & "Feels"
What Micropupil "Sees" & "Feels" (direct feedback or implied by observed behavior)
What Observer "Sees" & "Feels"
Receive Content of the Critique
Assimilate Content of Critique
New Trial

Appendix 10

UNIVERSITY INTRAMURAL CORRESPONDENCE

To: Dr. Richard A. Gibboney, Director, Experimental Teacher Training Program

From: Marika Kovacs, Doctoral Student in Counseling Psychology

Date: January 30, 1970

Re: Report on the T-Groups Conducted in the Fall of 1969 as Part of the Experimental Teacher Training Program

I. Purpose of the T-Group Sessions

In the original proposal (June 5, 1969) regarding the nature and [redacted] design of an encounter group within the Experimental Teacher Training Program, the purpose of the group was defined as:

"To increase ease and openness of communication among group members. To focus on the importance of listening, feedback and trust in establishing and maintaining effective interpersonal relations. To establish a climate where exploration of above will facilitate group cohesiveness and allow the emergence of group forces potentially supportive of individual learning."

Effective interpersonal communication was felt to be especially important in the micro-teaching phase of the experimental teacher training program. It was hoped that learning of effective interpersonal skills, openness of expression and receptivity to ideas would be best facilitated within a T-group structure.

II. Terms of the Contract

A. The Contract between Dr. Gibboney and Myself

The group meetings were to run for ten two-hour sessions (20 hours overall). Ten additional hours were to be made available for private consultation. The latter provision was designed to deal with discomforts individual students might experience as a result of the group meetings.

In actual practice, however, the allocated time was found to be far from sufficient. There were 19 students in the teacher training program. I felt that I could not work effectively with a group of such large size. Under the circumstances, the most feasible arrangement was to divide the large group into two small groups, and conduct two separate group sessions per week, each one and one-half hour long (30 hours overall).

The time allocated for individual consultation was not sufficient either. One student and I met four consecutive times, the first time for approximately one and one-half hours, and on the subsequent three

occasions, for one hour each. I met with another student on two separate occasions. Four additional students have seen me once. The students and I usually spent from one to two hours together in these meetings.

It was also specified that whatever transpired within the groups should remain confidential, and under no circumstance would material be used by me either in favor, or to the detriment of, the students in the program. Since I am still a student, I was to be supervised by my professors, Drs. Richard R. Bocchini and Arthur A. Dole of Psychological Services. The terms of confidentiality applied to the three of us equally.

B. The Contract between Members of the Groups and Myself

We agreed to meet for ten one and one-half hour sessions, and in individual consultation when desired. The terms of confidentiality were carefully explained. Both groups consented to three tapings which were to be used only by me for supervisory and consultation purposes. The tapes were not to be made available to anyone who was acquainted with the students or who had any power of decision over them. Members of both groups were also asked to write up reaction sheets of the sessions if they wished.

III. Impressions of the Progress of the T-Groups

The following are my personal impressions and opinions regarding the progress of our groups.

In the group sessions we were gradually confronted with various problem areas. For the sake of clarity these topics of concern are now listed separately. In the process of group development, however, issues often overlapped and were rarely this clear-cut.

A. Communication Was a Central Concern in Our Group Sessions

By communication, I mean the ability to listen and understand what the the other person is saying, the ability to provide relevant and constructive feedback, and awareness of one's impact. Effective communication also requires awareness of the nuances of nonverbal and verbal cues, and the ability to trust oneself and the other group members.

1. In both groups there were various degrees of mistrust and suspicion of fellow members. This was noticeable especially in the beginning, in somewhat rigid and unrelaxed postures. Members positioned their chairs slightly outside the circle. Mistrust was further inferred from the reluctance to talk about oneself or other group members; resistance of suggestions to examine ongoing group processes; a tendency to engage in apparently irrelevant issues, e.g. talk about "cars," "fraternities." The resistance was often terminated by a member announcing "here we go again," or "let's stop the bullshit."

2. During the initial sessions, destructive feedback was more frequent than constructive feedback. The former refers to feedback given in primarily negative terms, phrased in such a way that the individual is given no clues as to how his behavior may be altered. For example: "I realized in the beginning that you want to manipulate

people, so I just kept away from you," or "you are an S.O.B."

3. During the first few sessions, several members were noticeably reticent. They would often say absolutely nothing for a whole session. When questioned by others, they expressed fear of rejection by the group, or a great sense of inability to deal with an entire "group" at a time.

4. During the initial sessions, a sense of caring or feeling of group cohesivness was at a pretty low point. Often, two or three individuals would initiate "in" conversations. Remarks were made about events that other group members had no knowledge of, and little concern was shown that other members felt left out or neglected.

B. During the Students' Joint Summer Living Experience in Mantua rather Strong Stereotypes of One Another Emerged.

In the beginning of the living experience, for example, student X impressed others as one who did not talk much and did not initiate activities. As a result of these initial impressions, most group members came to stereotype student X as the "loner," a shy and non-assertive individual. The persistence of this stereotype was noticeable even during the group sessions in that no attempts were made to check out any of the assumptions made about X. None of the members tried to find out whether X was really shy, non-assertive, etc. On the other hand, student Y, who was extremely verbal and showed considerable self-initiative, became typed as a manipulative, callous person, insensitive to others' ideas, feelings and feedbacks.

While these "stereotypings" were probably adaptive responses to the stresses of living among eighteen strangers, they subsequently had two major negative consequences. They seemingly reduced openness toward and acceptance of the other person since they did not "allow" the other to be anything but what the stereotype entailed. New behaviors were viewed as confirmation of the stereotype. For example, student Y, mentioned above expressed a feeling in a gentle rather than assertive tone and asked the group for feedback instead of telling it off, his behavior was immediately reacted to as "just another manipulative twist." Stereotyping also seemed to have reduced the desire to try to find out what the other person is like in his totality, because it gave rise to feelings that the other person has already been "figured out."

C. We Also Had to Deal with Individual Expectations Regarding the T-groups, as Well as with Deep-Seated Personal Needs.

I can recall four students who exhibited overt resistance to any kind of involvement in the group interactions. This became evident in high absentism, almost complete lack of verbal or nonverbal interaction with others, and preoccupied self-involvement. These group members apparently made up their minds in advance that this "wasn't their cup of tea," or that they could not possibly function effectively in a group setting.

My feeling is that at least three other group members seriously hoped for some immediate major personality reconstruction. About the same number, while willing and productive participants, did verbalize that they expected very little to gain, if anything, from these group meet-

ings. A few students who at the time had to cope with great feelings of loneliness or isolation expected things which no group is designed or able to give. That is, a group cannot become an effective substitute for a caring friend or a tender lover. I doubt that we really "dealt" with these intense personal needs. These needs and phantasieshowever had to be verbalized and clarified whenever possible in order to understand how they influence one's ability to give to or to receive from the group. One student for example, engaged in periodic hostile and derogatory "evaluation" of the group's interactions, clearly ignoring whatever positive changes have taken place. In attempting to understand and deal with this student's feedback, it became clear that the hostility was a cover up for a great sense of personal loneliness and frustration because the "group" in effect, could do very little if anything to alleviate these feelings.

D. The Students Were Also Concerned about Their Color Differences.

This issue did not become verbalized until about the fourth session. However, from the beginning a greater sense of cohesiveness and "in" talk was noticeable among our black members. This was also accompanied by occasional "courtship" attempts by various white group members toward fellow black students. I want to make it clear at this point that I am <u>not</u> talking about bigotry. Rather, I am talking about a sense of reserve or uncertainty toward individuals of differing backgrounds; effects of past life experiences which have become intimately tied to one's color, primarily through cultural learning. As such, the "color line" is one of the lines which must be traversed before two people can effectively communicate with each other. Unfortunately, we did not come to explore this area very fully.

E. Feelings of Frustrations, Anxieties, and Uncertainties Were Experienced in Connection with the Rest of the Program.

The anxieties tended to be related to the relatively loose structure of the program for which the students' past educational experiences had not prepared them.

F. I Feel That in Both Groups, We Had Come to Deal with These Areas of Concern to Various Degrees.

From a longitudinal point of view, in both groups, there were noticeable changes in the manner and content of interpersonal communications. There was a gradual shift of referrents from "individuals external to the group," to "all of us," "everybody," "we," to "I." This was a very important and positive shift. It implied recognition and acceptance of one's identity and responsibility within the group structure. It denoted recognition of "what is it that <u>I</u> do?" to hinder or facilitate communication.

The groups also experienced a somewhat systematic but gradually increasing willingness to share perceptions of one another. At first, this tended to be in a somewhat hostile manner, <u>e.g.</u>, "you always think you know all the answers," or "I don't think you give a damn about X, Y, or Z," but it eventually transpired in increasing terms of tenderness and care. <u>E.g.</u>, "Did you ever think what it makes me feel like when you X, Y, or Z?", or "I had no idea that you really felt that way."

Various students, who, during the initial sessions shared very little if any of their own personal feelings, did eventually do so. Although at times these members did express reservations about the possible consequences of having shared themselves, it is important that they were willing to take a chance on the others. Student A who was remarkably reticent intitially, started to verbalize more and more and about the eighth session actually attempted to draw other students out of their apparent reserve. I also felt that several students had come to develop an awareness and appreciation of others' needs, as well as an understanding of how needs enter into and may possibly distort communication processes, for example, "As I listened to him, it really came to me for the first time that he was going on and on because he was lonely and just wanted to talk to someone." The experience of this new awareness was not only verbalized by group members, but was also observable in greater willingness to listen (not interrupting the other), increased eye contact, and gradual decrease of destructive feedback. Several members have come to verbalize their understanding that it is one's responsibility to make one's wishes and feelings known if changes are desired in others or in the environment.

Whether these changes in the patterns of interaction will have long-lasting impacts, or if they will be effectively transferred to teaching or private situations is something I would hope for but cannot be certain of. The group members and I spent the last meeting discussing their reactions to the sessions; six students gave me written reaction sheets. Three group members specifically mentioned that they experienced a transfer of learning from the group setting to teaching and private life situations, for example, a tendency to be more patient, greater willingness actually ~~to~~ listen to others, and an inclination to try to understand what the person's needs are.

In the discussion and on the reaction sheets four students expressed extreme dissatisfaction with the groups and felt that "it was often a waste of time," "we didn't really deal with any important issues." In other words, they felt that they didn't learn anything in the groups. The rest of the students experienced the group sessions in both positive and negative ways. Experiences most often mentioned were:

1. Very helpful cathartic experience, e.g., "there was safety in having some time set aside for opening up . . . otherwise we might have exploded," "kept me talking," "it gave people a chance to talk about things."

2. Learning experience with regard to self-knowledge, experienced both positively and negatively, e.g., "gained self-confidence in a group setting," "becoming aware of my inadequacies . . . was distressing," "made me look at myself in a new way . . . there was no topic, no tape, no evaluator except myself," "often felt very frustrated."

3. Sense of disappointment and frustration for not having accomplished enough, as an individual or as a group, e.g., "I am not sure that I now have the ability to see myself and be honest with myself and with others," "frustrating--because people had so much to say and weren't able to say it," "we didn't ask 'Who am I?' 'Where am I going?' . . . avoided questions."

4. Disappointment over occasional lag periods when apparently nothing meaningful took place, e.g., "several sessions were unimportant since we had nothing to talk about," "often not worthwhile because there was no direction."

   These "lag periods" seemed to occur either because a group resisted dealing with a particular issue, or were the aftermaths of especially involved and productive sessions, i.e., an inability to maintain a highly charged emotional atmosphere.

5. Feelings of frustration were also expressed concerning having been separated into two small groups, and in not having had more time to deal in depth with "several significant issues."

My impression is that the extent to which group members experienced the sessions as positive and growth producing depended partly on a combination of personality and motivational factors. Positive experiences seemed directly related to openness to new experiences, need to communicate, willingness to take a chance on others, and, in general, moderate expectations of gain from the sessions. Very low or very high expectations, overriding pessimism regarding any group experience, great personal needs and personality constriction appeared to be inversely related to the possibility of positive learning experiences within the group setting. I feel that with the exception of at least four students, referred to above, for each group member some learning did take place at least in terms of becoming cognizant of various aspects of the communication process and the complexity of factors which may hinder or facilitate it.

IV. Recommendations

A. The T-groups should be accepted as an integral part of the experimental teacher training program. Our group sessions indicate that such an experience can be effectively undertaken under the auspices of an educational program. Based on my own feelings and on the primarily favorable feedback received from the rest of the groups, an encounter group, systematically conducted over a length of time, has definite positive potential for improving interpersonal communications as related to teaching.

B. The groups should be initiated as soon as the students embark on their joint-living experience. I conceive of the early start as serving primarily two purposes. In the first place, it would provide a systematic and guided way of adjusting to the pressures of living with a great number of strangers, and consequently lessen the necessity of stereotyping of one another. In the second place, early initiation would mean more sessions. This would greatly facilitate the in-depth examination of complex issues and feelings which we could not deal with, due to lack of time.

C. I would suggest the following restructuring of the group sequence, individual group meetings every week, as last semester, and in addition, one large group meeting per month in which both groups would join. This would allow the groups to compare experiences and to examine large group processes where face-to-face communication becomes very difficult. During the spring semester I would suggest small group meetings once

every two weeks, a sort of "follow-up." These sessions may serve for assisting members to cope with issues and difficulties encountered in the actual process of implementing professional goals.

D. I would also recommend an empirical inquiry into the actual process of group development and verification of its effectiveness. This might call for systematic taping of all sessions. Randomly selected portions of the tapes could then be analyzed by independent judges, unfamiliar with the participants and the group tasks. Any changes in self-perception, perception of others, or in the accuracy of predicting others' perceptions of oneself might also be measured over time.

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MK:W

Appendix 11

Educ. 503 Dr. Gibboney/Mr. Arwyn Fall 1969

OBSERVER'S EVALUATION SHEET

TEACHER:_____ DATE:_____

TEACHING TASK:_____ OBSERVER:_____

1. Behavioral Objectives:

2. Appropriateness of objectives to teaching task:

3. Tactics:

4. Appropriateness of tactics to objectives:

5. Achievement of objectives:

6. Accuracy of prediction of student responses:

7. Student behaviors observed:

8. Teacher responses to student behaviors/reactions:

9. Comments on style and mannerisms:

10. General comments:

Appendix 12

Course Objectives for Ed. 503 Microteaching

A. To demonstrate increasing ability to employ effective teaching strategies to achieve specific objectives in a particular lesson.

B. To employ an increasing range of appropriate tactics to achieve a lesson objective (see the taxonomy of tactics.)

C. To develop a positive attitude toward teaching and the development of individual criteria for one's improved teaching performance.

D. To be able to critique another student's lesson in an objective manner using or adapting the criteria and process used by the instructor in class.

E. To be able to receive and discuss criticism of one's teaching in a rational manner.

F. To demonstrate significant improvement in one's teaching as seen by a) one's self and b) competent observers.

G. To be able to work effectively in a class in which the initial course structure is determined by the teacher but in which a wide range of student initiative and responsibility for one's learning is encouraged.

H. To voluntarily read books and articles dealing with teaching or other aspects of education.

I. To develop more mature and personally derived values by which one chooses and evaluates educational experiences for one's self.

Appendix 12 continued

Course Objectives for Ed. 503 Microteaching

J. To know from one's experience in this course that significant personal, professional, and liberal learning is possible through a student-centered, inductive process which places a premium on student initiative, responsibility, and problem definition with little or no a priori imposition by the teacher.

K. To increase one's knowledge and understanding of the self.

Appendix 13

University of Pennsylvania

Graduate School of Education

504 Questionnaire for Experimental and Comparison Groups

Name _____

Where Placed _____

Duties _____

Number of classes taught _____

1. Were half or more of the skills which you learned in microteaching transferable to your present teaching situation?

	1	2	3	4	5	
No Transference	0	1	1	1	1	High Transference
			Half of Skills			

2. Has your present situation allowed for improvement and refinement of these skills?

Yes No

Why or why not?

3. Direct teaching techniques are generally more effective than indirect teaching methods in modification of student values and increasing the desire to learn in a course in

Mathematics

	1	2	3	4	5	
	0	1	1	1	1	
strongly agree		agree	neutral	disagree		strongly disagree

504 Evaluation--Experimental Program in Urban Education

3. Continued

English

1	2	3	4	5
0	1	1	1	1

Science

1	2	3	4	5
0	1	1	1	1

Social Studies

1	2	3	4	5
0	1	1	1	1

4. Do you think your present placement provides an environment which students and educators would judge to be more conducive to learning than those typically found in urban and suburban schools?

Yes No

5. Have members of the institutional staff (at your placement) with whom you have interacted on a frequent basis contributed positively to your development as a teacher?

Yes (in what way?) No (why not?)

6. Has your interaction with students contributed to your development as a teacher?

Yes (in what way?) No (why not?)

504 Evaluation--Experimental Program in Urban Education--Continued

7. How did this course affect in general your motivation to become an excellent teacher?

increased no effect decreased

comments

8. Recall your initial degree of interest (motivation) in teaching during the first 4 weeks of the Experimental Program--compared with that, would you say your present level is

high medium low

9. As a result of this course, did your concept of what teaching is change?

Yes (how?) No

10. Have you begun, as a result of this course, to formulate a teaching plan for next year's teaching?

Yes No

Explain

11. Based on your experience in this course, what kind of school do you hope to teach in next year?

12. Has this desire changed from the time you began this course to the present?

Yes No

In what way?

504 Evaluation--Experimental Program in Urban Education--Continued

13. Do you feel that your ability as a teacher is significantly greater now than at the end of microteaching?

Yes No

How?

Why?

14. Has this experience increased your knowledge and understanding of pupils?

Yes No

How?

15. Did your interaction with school administrators increase your knowledge of the operation of the school?

Yes No Never interacted with administrators

16. Do you feel that the value of this course is so great, in relation to 502 and 503, that the length of time which it encompasses should be increased?

Yes No

Comments--increased to what length? decreased to what length? changes recommended?

Additional comments not covered in this questionnaire:

University of Pennsylvania

Graduate School of Education

Intern Program

Name (Optional)_____

Where Placed_____

1. Were half or more of the skills which you learned in your methods courses transferable to your present teaching situation?

	1	2	3	4	5	
No Transference	0	1	1	1	1	High Transference
			Half of Skills			

2. Has your present situation allowed for improvement and refinement of these skills?

Yes No

Why or why not?

3. Direct teaching techniques are generally more effective than indirect teaching methods in modification of student values and increasing the desire to learn in a course in

Mathematics

	1	2	3	4	5	
	0	1	1	1	1	
Strongly disagree		disagree	neutral	agree		strongly agree

English

	1	2	3	4	5
	0	1	1	1	1

Intern Program continued

Science

1	2	3	4	5
0	1	1	1	1

Social Studies

1	2	3	4	5
0	1	1	1	1

4. Have members of the institutional staff (at your placement) with whom you have interacted on a frequent basis contributed positively to your development as a teacher?

Yes (in what way?) No (why not?)

5. Has your interaction with students contributed to your development as a teacher?

Yes (in what way?) No (why not?)

6. How did this course affect in general your motivation to become an excellent teacher?

increased no effect decreased

comments

7. Recall your initial degree of interest (motivation) in teaching at the beginning of the Intern Program--compared with that, would you say your present interest level is

high medium low

8. As a result of this program, did your concept of what <u>teaching</u> <u>is</u> change?

Yes (how?) No

Intern Program continued

9. Have you begun, as a result of this program, to formulate a teaching plan for next year's teaching?

Yes No

Explain

10. Based on your experience in this program, what kind of school do you hope to teach next year?

11. Has this desire <u>changed</u> from the time you began <u>this program</u> to the present?

Yes No

In what way?

12. Do you feel that your ability as a teacher is <u>significantly</u> greater now than at the end of the fall semester?

Yes No

How?

Why?

13. Has this program increased your knowledge and understanding of pupils?

Yes No

How?

14. Did your interaction with school administrators increase your knowledge of the operation of the school?

Yes No Never interacted with administrators

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Additional comments not covered in this questionnaire:

Appendix 14

503 Questionnaire on which the Content Analysis is Based

1. The basic method used in this course was inductive. Please describe the impact of this method on the following:
   a. on learning the basic skills of teaching
   b. on your attitudes towards teaching
   c. on your attitudes towards yourself and others in the class
   d. on attitudes towards your own learning
2. Please describe your motivational state throughout the course.
3. What is the value of 503 in relation to other Liberal Arts and Education courses which you have taken?
4. What are the strengths of this course?
5. What are the weaknesses of this course?
6. a. Describe the extent of your outside reading.
   b. Was your desire to read increased, decreased, or unaffected as a result of this course?
   c. What were the major topics which constituted the focus of your reading?
   d. Was the Bibliography helpful?

Appendix 15

Categories for Analyzing Non-verbal Classroom Behavior

(This instrument was developed by Richard A. Gibboney and Michael G. Langsdorf, January, 1970. It will be revised as necessary on the basis of its use in microteaching and evaluation.)

Classroom Organization

1. Total group
2. Small group
3. Individual student

Classroom Movement

1. Teachers or other adults circulate and engage in verbal or non-verbal interaction with students.
2. Pupil(s) move and interact with other pupils or adults without permission of the teacher when the teacher sees this movement, but does not criticize the movement. The movement is related to the work being done.
3. Pupil(s) move about the room without permission of the teacher but do not interact with anyone in the room.
4. Pupils move about the room without permission of the teacher, but interact in a manner which is disruptive from the work being done.

Pupil Self-Direction

1. Pupil determines the pace of his activities.
2. Pupils self-select instructional materials, topics, problems, or content through either "free choice" or from alternatives posed by the teacher.

Media are Used by Pupils and/or Teacher

(Media: any tangible instructional material used in the lesson.)

Non-Verbal Communication Cues

a. Positive Cues: smiling, nodding of head, encouraging motion of hands.

b. Negative Cues: Looking "past" pupil or group, any use of the body which conveys the message "don't do that" or "wrong pupil behavior."

Note: To reduce the degree of observer interpretation, subcategories of specific pupil teacher behaviors will be added to the general categories as experience dictates.

(The reason for the use of the non-verbal instrument in the study should be clear: If teacher/pupil behavior is judged to be Indirect or Direct on the basis of verbal interaction analysis, does the analysis of other pertinent dimensions of behavior, such as non-verbal behavior, lead to the same or to a different conclusion? The analysis of teaching tactics used here is a similar effort to test, in a preliminary way, the same question.)

Appendix 16

Self-Growth Questionnaire for Experimental and Comparison Groups

1. Do you feel that, as a result of your involvement with the Experimental Program, you were better able to function as a teacher, in your practicum than other interns or student teachers with whom you came into contact?

   Yes — why?

   No — why not?

2. Did this program help you to increase your knowledge of self?

   Yes

   No

   In general, by what means?--How?--Significant events!

3. Did this program help you to increase your knowledge of

   a. others in program — yes — no

   comments--specific events

   b. others outside of program — yes — no

   comments--specific events

4. Do you think, as a result of this program you have increased your

   a. ability to accept and act upon criticism of your behavior as a teacher?

   1 2 3 4 5 much more able
   not more able

   b. openness to suggestion about new ideas of teaching?

   1 2 3 4 5

   c. self-awareness of your own inadequacies as a teacher?

   1 2 3 4 5

Self-growth Evaluation continued

4. d. ability to use evaluative method?

1 2 3 4 5

e. commitment to teaching?

1 2 3 4 5

f. respect for student?

1 2 3 4 5

g. willingness to experiment?

1 2 3 4 5

h. ability to cope with anxiety-ridden situation?

low 1 2 3 4 5 high

5. In approaching a problem do you now feel that the solution is qualitatively better when arrived at in a group situation? Yes No

To what extent has this course increased that tendency?

low 1 2 3 4 5 high

6. Are you as well advanced in your development as a teacher as you had hoped at the beginning of the program that you would be by this time?

more advanced as well advanced less well advanced

comment

7. In general, did this program fulfill the expectations which you had of it before entering?

Yes No

How? Why not?

Self-growth Evaluation continued

8. Do you feel that the sequence of experiences which you have had in these courses should be altered?

Self-growth Intern Program

1. Did this program help you to increase your knowledge of self?

   Yes No

   In general, by what means?--How?--Significant events!

2. Did this program help you to increase your knowledge of

   a. others in program yes no

   comments specific events

   b. others outside of program yes no

   comments--specific events

3. Do you think, as a result of this program you have increased your

   a. ability to accept and act upon criticism of your behavior as a teacher?

   1 2 3 4 5 much more able
   not more

   able

   b. openness to suggestions about new ideas of teaching?

   1 2 3 4 5

   c. self-awareness of your own inadequacies as a teacher?

   1 2 3 4 5

   d. ability to use the inductive method?

   1 2 3 4 5

   e. commitment to teaching?

   1 2 3 4 5

   f. respect for student?

   1 2 3 4 5

Self-growth Intern Program continued

g. willingness to experiment?

1 2 3 4 5

h. ability to cope with anxiety-ridden situation?

low 1 2 3 4 5 high

4. In approaching a problem do you now feel that the solution is qualitatively better when arrived at in a group situation? Yes No

To what extent has this program increased your skills in working with groups?

low 1 2 3 4 5 high

5. Are you as well advanced in your development as a teacher as you had hoped at the beginning of the program that you would be by this time?

more advanced as well advanced less well advanced

comment